

VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES permit listed below. This permit is being processed as a minor, municipal permit. The effluent limitations contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260 et seq. The discharge results from the operation of a publicly owned sewage treatment plant. This permit action consists of updating the permit with a new Copper limitation and to reflect changes in Water Quality Standards, Guidance Memos, and the VPDES Permit Manual.

SIC Code: 4952 Sewerage Systems

1. Facility Name and Address: McKenney Sewage Treatment Plant
Route 1010 Extension
McKenney, VA 23872
Contact: E. Winfried Coleman, Operator
Telephone No: (804) 478-4621
2. Permit No. VA0060402 Expiration Date: May 18, 2009
3. Owner Name and Address: Town of McKenney
P.O. Box 309
McKenney, VA 23872
Contact: Charles T. Mansfield, Mayor
Telephone No: (804) 478-4621
4. Application Complete Date: February 18, 2009
(Administratively Complete: December 4, 2008)
Permit Drafted By: Tamira Cohen Date: April 6, 2009
Reviewed By: Emilee Carpenter Date: April 9, 2009
Reviewed By: Gina Kelly Date: April 28, 2009
Reviewed By: Curtis Linderman Date: July 26, 2009
DEQ Regional Office: Piedmont Regional Office
5. Receiving Stream Name: Great Creek
River Mile: 5AGRC001.92
Basin: Chowan River & Dismal Swamp
Subbasin: Chowan River
Section: 2b
Class: III
Special Standards: None

7-Day, 10-Year Low Flow (7Q10): 0 MGD
1-Day, 10-Year Low Flow (1Q10): 0 MGD
30-Day, 10-Year Low Flow (30Q10): 0 MGD
30-Day, 5-Year Low Flow (30Q5): 0 MGD
7-Day, 10-Year High Flow (7Q10): 0.005 MGD
1-Day, 10-Year High Flow (1Q10): 0.003 MGD
30-Day, 10-Year High Flow (30Q10): 0.021 MGD
Harmonic Mean Flow (HM): 0.005 MGD
Tidal? NO 303(d) list? NO
See **Attachment A** – Flow Frequency Determination Memorandum

6. Operator License Requirements: The recommended attendance hours by a licensed operator and the minimum daily hours that the treatment works should be manned by operating staff are contained in the Sewage Collection and Treatment Regulations (SCATS) 9 VAC 25-790 et seq. A Class III licensed operator is required for this facility.
7. Reliability Class: Reliability is a measurement of the ability of a component or system to perform its designated function without failure or interruption of service. The reliability classification is based on the water quality and public health consequences of a component or system failure. The permittee is required to maintain Class II Reliability for this facility.
8. Permit Characterization:
- | | |
|---|---|
| <input type="checkbox"/> Issuance
<input checked="" type="checkbox"/> Reissuance
<input type="checkbox"/> Revoke & Reissue
<input type="checkbox"/> Owner Modification
<input type="checkbox"/> Board Modification
<input type="checkbox"/> Change of Ownership/Name
Effective Date:
<input checked="" type="checkbox"/> Municipal
SIC Code(s): 4952
<input type="checkbox"/> Industrial
SIC Code(s):
<input checked="" type="checkbox"/> POTW
<input type="checkbox"/> PVOTW
<input type="checkbox"/> Private
<input type="checkbox"/> Federal
<input type="checkbox"/> State | <input checked="" type="checkbox"/> Existing Discharge
<input type="checkbox"/> Proposed Discharge
<input checked="" type="checkbox"/> Effluent Limited
<input checked="" type="checkbox"/> Water Quality Limited
<input type="checkbox"/> WET Limit
<input type="checkbox"/> Interim Limits in Permit
<input type="checkbox"/> Interim Limits in Other Document (attached)
<input checked="" type="checkbox"/> Compliance Schedule Required
<input type="checkbox"/> Site Specific WQ Criteria
<input type="checkbox"/> Variance to WQ Standards
<input type="checkbox"/> Water Effects Ratio
<input type="checkbox"/> Discharge to 303(d) Listed Segment
<input type="checkbox"/> Whole Effluent Toxicity Program Required
<input type="checkbox"/> Toxics Reduction Evaluation
<input type="checkbox"/> Possible Interstate Effect
<input type="checkbox"/> Storm Water Management Plan |
|---|---|
9. Wastewater Flow and Treatment:

Outfall Number	Wastewater Source	Treatment	Design Flow (MGD)
001	Domestic wastewater generated by sanitary sewer service area (99.5% domestic sources and 0.5% commercial sources).	Comminution, extended aeration activated sludge unit, clarification, polishing pond, chlorination, dechlorination, post aeration.	0.10

See **Attachment B** – Wastewater Treatment Plant Schematic

10. Sewage Sludge Use or Disposal: Digested sludge is dewatered in sludge drying beds. The dewatered sludge is periodically hauled to the Atlantic Waste Landfill for disposal.
11. Discharge Location Description: See **Attachment C** – Location Map (USGS McKenney Quad, VA – 040B).
12. Material Storage: Chlorine gas cylinders and other chemicals stored under roof.

13. Ambient Water Quality Information: A DEQ ambient water quality monitoring station is not located on the receiving stream. Stream flows (as calculated) are intermittent with no measurable flow expected under dry conditions (dry during low flow conditions). While stream quality data from Waqua Creek at the Route 712 bridge (located within the same watershed as Great Creek) is input into MSTRANTI for the calculation of Waste Load Allocations (WLAs), these would only be considered if wet weather flow (high flow conditions) were considered. Since tiered permit limits are not evaluated in this permit reissuance (which would allow for wet weather conditions), stream water quality data is effectively not used (only effluent data is used) by MSTRANTI in the spreadsheet calculations. Only effluent data is used in MSTRANTI spreadsheet calculations to determine WLA when stream flow is 0 under low flow conditions. See below for further details on the DEQ MSTRANTI spreadsheet program. See **Attachment A** for the Flow Frequency/303(d) Determinations and ambient stream quality data provided by Jennifer V. Palmore, DEQ PRO Senior Environmental Planner.
14. Antidegradation Review & Comments:
- Tier: 1 X 2 3
- The State Water Control Board's Water Quality Standards include an antidegradation policy (9 VAC 25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.
- The antidegradation review begins with a Tier determination. During the 1998 planning level monitoring effort (van Soestbergen 8/17/98), Great Creek was determined to be a Tier 1 water. (See Planning Level Stream Sanitation Analysis, **Attachment D** and Flow Frequency/303(d) Determinations memo, **Attachment A**).
15. Site Inspection: Date March 20, 2007 Performed by Mike Dare
See **Attachment E** for Inspection Report

16. Effluent Screening & Limitation Development:

PARAMETER	BASIS	DISCHARGE LIMITS				Monitoring Requirements	
		MO AVG	WK AVG	MIN	MAX	FREQ	SAMPLE TYPE
001 Flow	NA	NL	NA	NA	NL	Continuous	TIRE
002 pH	1,2	NA	NA	6.0 s.u.	9.0 s.u.	1/Day	Grab
003 5-Day Biological Oxygen Demand (BOD ₅)	3	25 mg/L 9,500 g/day	38 mg/L 14,000 g/day	NA	NA	1/Week	4HC
004 Total Suspended Solids (TSS)	2, 3	30 mg/L 11,000 g/day	45 mg/L 17,000 g/day	NA	NA	1/Month	4HC
005 Total Residual Chlorine (TRC)	1	0.0074 mg/L	0.0084 mg/L	NA	NA	3/Day at 4 Hr Intervals	Grab
007 Dissolved Oxygen (DO)	4	NA	NA	6.6 mg/L	NA	1/Day	Grab
039 Ammonia-N (NH ₃ -N)	1	5.11 mg/L	5.11 mg/L	NA	NA	1/Week	4HC
203 Copper, Total Recoverable	1	0.0093 mg/L	0.0093 mg/L	NA	NL	1/Month	Grab
157 TRC**	4	NA	NA	1.0 mg/L	NA	3/Day at 4 Hr Intervals	Grab
213 TRC**	4	NA	NA	0.60 mg/L	NA		

1. Water Quality Based Effluent Limitations
2. Federal Effluent Limit Guidelines
3. Chohan River-Dismal Swamp Basins Water Quality Management Plan (CRDSB-WQMP), April 1982.
4. Best Engineering Judgment

**157 and 213 TRC samples are taken prior to dechlorination (they are not final effluent).

See **Attachment F** for Facility Effluent Data Summary and Evaluation, **Attachment G** for MSTRANTI Printout and MSTRANTI Data Source Report, **Attachment H** for Table 2 from the CRDSB - WQMP.

pH: A pH limitation of 6.0-9.0 Standard Units is assigned to all Class III waters in accordance with VA Water Quality Standards, 9VAC 25-260-50 and federal effluent limit guidelines for secondary treatment (40 CFR 133.102).

BOD₅: The BOD₅ monthly average limitations of 25 mg/L (9500 g/day) and weekly average limitations of 38 mg/L (14000 g/day) are carried forward from the 2004 permit reissuance and are in accordance with the CRDSB-WQMP. These limits are still appropriate for the STP given that no major changes have occurred with respect to the plant or effluent.

TSS: The TSS monthly average limitations of 30 mg/L (11,000 g/day) and weekly average limitations of 45 mg/L (17,000 g/day) are carried forward from the 2004 permit reissuance. These limits are in accordance with federal effluent limit guidelines for secondary treatment (40 CFR

133.102). These limits are still appropriate for the STP given that no major changes have occurred with respect to the plant or effluent.

Ammonia (NH₃), Total Residual Chloride (TRC), and pollutants reported above QLs in the application (Attachment A Water Quality Criteria Monitoring submitted November 2008) undergo further evaluation as described below. NH₃ and TRC are assumed to be present at statistically derived default values in chlorinated effluent discharged from sewage treatment plants (see below). For NH₃, TRC, Total Recoverable Copper (Cu), Total Recoverable Zinc (Zn), and Chlorides, limitation evaluation begins with a wasteload allocation analysis using MSTRANT1 draft k, version 1 (a DEQ Excel spreadsheet—See **Attachment G**). Acute and chronic waste load allocations are calculated from criteria for surface water given in the VA Water Quality Standards (9VAC 25-260, September 2007). Statistically derived permit limits are then obtained by inputting these acute and chronic waste load allocations along with default data values and required quantification limits (QLs) for NH₃ and TRC and reported sample data values and QLs for Cu, Zn, and Chlorides (see **Attachment F**) into the DEQ statistical program (STATS.exe). Since the discharge is to an intermittent stream, effluent data is used to characterize the stream during low flow conditions.

TRC: The wasteload allocation analysis was conducted as described above. The monthly average limitation (0.0074 mg/L) is more stringent than in the 2004 permit reissuance. The weekly average limitation (0.0084 mg/L) replaces the 2004 permit reissuance limitation (0.008 mg/L). The 2004 weekly average limitation was expressed using one significant figure and the new 2009 weekly average limitation is now expressed using two significant figures in accordance with current agency guidance. The monitoring frequency of 3/Day (at 4 hour intervals) for the TRC effluent at Outfall 001, which matches the TRC contact tank monitoring frequency, is carried forward for this 2009 permit reissuance in accordance with the decision recorded in the minutes of the 11/19/08 DEQ Water Permit Managers Conference Call Meeting. This monitoring frequency was input into the STATS analysis along with a TRC default data value of 20.0 mg/L (used to force the calculation of a limit where chlorination is the means of disinfection). Since chlorine is a known toxicant and purposefully introduced into the effluent, a chlorine limit is required.

NH₃: The NH₃ monthly/weekly average limitations of 5.11 mg/L are carried forward from the 2004 permit reissuance. The wasteload allocation analysis was conducted as described above with the exception that an ammonia default data value of 9.0 mg/L was used in place of effluent data in accordance with DEQ Guidance Memo No. 00-2011. Ammonia is known to be present in domestic effluents and thus a reasonable potential exists for any domestic facility to cause or contribute to a violation of the VA Water Quality Standards. This default value is the expected number resulting from the analysis of a large body of ammonia concentration data in domestic effluents. The current analysis shows that the NH₃ monthly and weekly average effluent limitations may both increase to 7.55 mg/L, however, the previous monthly and weekly average limitations are carried forward to this reissuance as stated above in order to avoid antibacksliding violations. The facility has been in compliance with the existing NH₃ limitations. The 2004 permit limitation was carried forward from the 1999 permit limitation and evaluation. The 1999 permit documentation includes a STATS printout (See **Attachment G**) which supports the expression of the new 2009 limit in three significant figures as stated above. The limit is now written in three significant figures in accordance with the underlying NH₃ Water Quality Standard.

Total Recoverable Copper: A new monthly/weekly average limitation of 0.0093 mg/L was deemed necessary following the limitation evaluation described above. One sample data value submitted with the permit application (November 2008) was supplemented with 10 additional

sample data values submitted February 18, 2009. Both dissolved and total recoverable data values were submitted. Given the VA Water Quality Criteria is in the dissolved form for metals, only the one reported dissolved data value submitted with the original application November 2008 was used in the analysis as per current agency guidance (DEQ GM00-2011).

Total Recoverable Zinc: A limit is not required as indicated by the limitation evaluation described above.

DO: The DO minimum limitation of 6.6 mg/L is carried forward from the 2004 permit reissuance. This limit is more stringent than DO concentration requirements given within the VA Water Quality Standards, but is carried forward in this reissuance in order to avoid antibacksliding concerns. The existing discharge has never been modeled as stated in the August 17, 1998 Planning Level Stream Sanitation Analysis (See **Attachment D**). Modeling was only performed on a proposed increase in discharge flow which was never implemented. The facility has been in compliance with the existing DO limitation.

TRC (157 and 213): Limits are carried forward from the 2004 permit reissuance (in 2009 permit reissuance special condition Part I.B.). See Item #20.B. for special condition rationale.

Radionuclides: In the application, data is reported for Beta Particle and Photon Activity in units of concentration (pCi/L) whereas the applicable water quality standard is an exposure in terms of mrem/yr. The EPA has established this same standard for community potable water systems. Federal regulation 40 CFR Part 141 states that compliance with the potable water standard may be assumed if the average annual concentration of Beta Particle and Photon Activity is less than 50 pCi/L and the average annual concentrations of Tritium and Strontium-90 are less than 20,000 pCi/L and 8 pCi/L, respectively. Tritium (<143 pCi/L) and Strontium-90 (<0.5 pCi/L), which are both reported below quantification levels, and the reported Gross Beta Particle and Photon Activity (6.5 pCi/L) all indicate that compliance with this standard is achieved.

Chlorides: A limit is not required as indicated by the limitation evaluation described above. One sample data value (44 mg/L) was submitted with the permit application (November 2008).

E. coli: One sample data value (115 N/100 mL) is reported with the application. In accordance with current agency guidance (as addressed in the minutes of the January 22, 2008 Water Permits Managers' Conference Call), a bacterial limit (*E. coli* for dischargers to freshwater receiving waters) is only required at this time for all major municipal facilities and all facilities that discharge to receiving waters requiring TMDLs for bacteria. McKenney STP is a minor municipal facility and the receiving stream does not have an approved TMDL nor is it listed as impaired in the most recent Water Quality Assessment Report (2008). It should be noted that the reported data value is below both the geometric mean (126 N/100 mL) and the single sample maximum (235 N/100 mL) values typically used to limit facility effluent when applicable.

All other parameters were below QLs or assumed absent for the purposes of this evaluation.

17. Basis for Sludge Use & Disposal Requirements: Not applicable as this facility pumps and hauls sludge off-site. See Item #10 above.
18. Antibacksliding Statement: All limits are at least as stringent as in the 2004 permit reissuance. Changes in the BOD₅ and TSS limits are not considered backsliding as the concentration values have not changed, merely the expression of the limits with the change of units (kg/d to g/d). The

change in the TRC Weekly Average limitation from 0.008 mg/L to 0.0084 mg/L reflects a change in precision and not a change in the actual value (mathematically equivalent).

19. Compliance Schedules: The VPDES Permit includes a schedule of compliance for the new Copper limitation. Given the facility effluent data, a 4-year schedule of compliance was deemed appropriate. The schedule is provided in Part I.D. of the permit, in accordance with 9 VAC 25-31-250.

20. Special Conditions:

B. Additional Chlorine Limitations and Monitoring Requirements

Rationale: Required by VA Water Quality Standards, 9 VAC 25-260-170 Bacteria: other waters. Also, 40 CFR 122.41(e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment in order to comply with the permit. This ensures proper operation of chlorination equipment to maintain adequate disinfection.

C.1. 95% Capacity Reopener

Rationale: Required by VPDES Permit Regulation, 9 VAC 25-31-200 B4 for all POTW and PVOTW permits.

C.2. CTC & CTO Requirement

Rationale:

Required by Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulation, 9 VAC 25-790-50.

C.3. O&M Manual Requirement

Rationale: Required by Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulation, 9 VAC 25-790; VPDES Permit Regulation, 9 VAC 25-31-190 E.

C.4. Licensed Operator Requirement

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 C and the Code of Virginia § 54.1-2300 et seq, Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.), requires licensure of operators.

C.5. Reliability Class

Rationale: Required by Sewage Collection and Treatment Regulations, 9 VAC 25-790-70 for all municipal facilities.

C.6. Materials Handling/Storage

Rationale: 9 VAC 25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia § 62.1-44.16 and 62.1-44.17 authorizes the Board to regulate the discharge of industrial waste or other waste.

C.7. Sludge Reopener

Rationale: Required by VPDES Permit Regulation, 9 VAC 25-31-220 for all permits issued to treatment works treating domestic sewage.

C.8. Sludge Use and Disposal

Rationale: VPDES Permit Regulation, 9 VAC 25-31-100 P; 220 B 2; and 420 through 720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on sludge use and disposal practices and to meet specified standards for sludge use and disposal.

C.9. **Compliance Reporting**

Rationale: Authorized by VPDES Permit Regulation, 9 VAC 25-31-190 J 4 and 220 I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

C.10. **Total Maximum Daily Load (TMDL) Reopener**

Rationale: Section 303(d) of the Clean Water Act requires that TMDLs be developed for waters listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving waters. This reopener is being put into all permits even if the discharge is not to a listed segment. The reopener recognizes that, according to section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.

C.11. **Facility Closure Plan**

Rationale: Code of Virginia § 62.1-44.19 of the State Water Control Law. This condition is used to notify the owner of the need for a closure plan where a treatment works is being replaced or expected to close.

C.12. **Indirect Dischargers**

Rationale: Required by VPDES Permit Regulation, 9 VAC 25-31-200 B1 and B2 for POTWs and PVOTWs that receive waste from someone other than the owner of the treatment works.

C.13. **Significant Discharger Survey**

Rationale: VPDES Permit Regulation, 9 VAC 25-31-730 through 900, and 40 CFR part 403 require certain existing and new sources of pollution to meet specified regulations.

D. **Compliance Schedule**

Rationale: 9 VAC 25-31-250 allows for schedules of compliance, when appropriate, which will lead to compliance with the Clean Water Act, the State Water Control law and regulations promulgated under them.

Part II **Conditions Applicable to All Permits**

Rationale: VPDES Permit Regulation, 9 VAC 25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

21. Changes to Permit

Changes to Cover Page	
Changes	Reason
Format	Format and wording updated to reflect current agency guidance (VPDES Permit Manual boilerplate, last revised February 16, 2007).

Changes to Part I.A.1 Outfall 001					
Parameter	Effluent Limits		Monitoring Requirements		Reason
	From	To	From	To	
BOD ₅ MO/WK AVG	9.5 kg/d 14 kg/d	9,500 g/d 14,000 g/d	NC	NC	Loading units changed and limits rewritten to report whole numbers consistently and reflect two significant figures in accordance with DEQ Guidance Memo 06-2016.
TSS MO/WK AVG	11 kg/d 17 kg/d	11,000 g/d 17,000 g/d			
Ammonia	5.1 mg/L	5.11 mg/L	1/MO Grab	1/WK 4HC	Limits rewritten to report two significant figures in accordance with DEQ Guidance Memo 06-2016. Monitoring frequency revised in accordance with current agency guidance.
TRC WK AVG TRC MO AVG	0.008 mg/L 0.008 mg/L	0.0084 mg/L 0.0074 mg/L	NC	NC	Limits rewritten to report two significant figures in accordance with DEQ Guidance Memo 06-2016.
Total Recoverable Copper	NR	0.0093 mg/L	NR	1/MO	New limit reflects data submitted for 2009 permit reissuance and current WLA's. See Attachments F and G .
NC = No Change NL = Monitor Only NR = Not required					

Other Changes to Part I.A.1 Outfall 001
<p>Footnotes and legend for Part I.A.1. (Outfall 001) of the 2009 permit reissuance were inserted to reflect new format and revisions as indicated below:</p> <p>Part I.A.1.a. of the 2004 permit reissuance was changed to Part I.A.1. footnote (a). Flow was changed from one significant figure to two (0.1 MGD to 0.10 MGD) and an additional sentence pertaining to flow requirements was added.</p> <p>Part I.A.1.b. of the 2004 permit reissuance was changed to Part I.A.1. footnote (c). Language was modified for clarification.</p> <p>Footnote (b) and (d) were added to the 2009 permit reissuance in accordance with DEQ GM06-2016 and to reflect the compliance schedule for the new Copper limit.</p> <p>Part I.A.3. in the 2004 permit reissuance was moved to Part I.A.4, and BOD was changed to BOD₅.</p> <p>Part I.A.3. was added to the 2009 permit reissuance in accordance with current agency guidance.</p>

Special Condition Changes		
From	To	Rationale
B	B	Additional Chlorine Limitations and Monitoring Requirements—Language and format was revised. TRC (DMR parameter 213) was changed from 0.6 to 0.60 mg/L to reflect increase to two significant figures in accordance with DEQ Guidance Memo 06-2016.
C.1.	C.1.	95% Capacity Reopener—The address for the regional office (PRO) was removed.
--	C.2.	CTC, CTO Requirement—Added in accordance with current VPDES Permit Manual boilerplate (last revised June 15, 2007).
C.2.	C.3.	O&M Manual—Reflects changes in VPDES Permit Manual boilerplate (last revised June 15, 2007).
C.5.	C.4.	Licensed operator requirement— No change.
C.4.	C.5.	Reliability class—No change.
C.3.	C.6.	Materials Handling/Storage—No change.
C.6.	C.7.	Sludge Reopener— “DEQ” changed to “The Board” as specified in current VPDES Permit Manual boilerplate (last revised June 15, 2007).
C.7.	C.8.	Sludge Use and Disposal—Reflects changes in VPDES Permit Manual boilerplate (as determined in PRO Permitting Staff Meeting, 4/29/09) following transfer of program from VDH to DEQ.
C.9.	C.9.	Compliance Reporting—Revised in accordance with current VPDES Permit Manual guidance and addition of QL for Copper monitoring/limitation (0.4WLAa as per current VPDES Permit Manual, Section MN-3 as last revised June 15, 2007 and calculated value as per MSTRANTI spreadsheet –See Attachment G). Language revised to improve clarity in accordance with PRO Staff decision on May 6, 2008.
--	C.10.	Total Maximum Daily Load (TMDL) Reopener—Added in accordance with current VPDES Permit Manual boilerplate (last revised June 15, 2007).
C.8.	C.11.	Facility Closure plan—Revised in order to update requirements under the Sewage Collection and Treatment regulations (for new construction or substantial modification) and include requirement for permanent closure. See Item #20. C.11.
C.10.	C.13.	Significant Discharger Survey—No change.
C.11.	C.12.	Indirect Dischargers—Revised in accordance with current VPDES Permit Manual boilerplate (last revised June 15, 2007).
--	D.	Compliance Schedule—Added for the new Copper limit in the 2009 permit reissuance.

22. Variances/Alternate Limits or Conditions: None.

23. Public Notice Information required by 9 VAC 25-31-280 B:

Publication Dates: August 19, 2009 and August 26, 2009

Comment period Start Date: August 19, 2009 End Date: September 19, 2009

Publication in: Dinwiddie Monitor

All pertinent information is on file and may be inspected, and copied by contacting Tamira Cohen at:

VDEQ - Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060
Telephone No. (804) 527-5012
E-mail address: tcohen@deq.virginia.gov

DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief,

informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.

The public may review the draft permit and application at the DEQ Piedmont Regional Office by appointment.

Public Comment: None.

24. Additional Comments:

Previous Board Action: None.

Staff Comments:

- a. In response to the DGIF request, screening for threatened and endangered species was performed within a 2 mile radius of the existing discharge in accordance with DEQ Guidance Memo No. 07-2007. Two aquatic species were identified with federal (F) or state (S), endangered (E) or threatened (T) status in the Nottoway River. The receiving stream (Great Creek) is approximately 1.5 miles upstream of the confluence with the Nottoway River. While DCR provided comments that information provided addressed their concerns, DGIF reported concerns in an email dated February 27, 2009 relating to the potential impact of ammonia in the effluent that may reach the lower perennial portion of the receiving stream that may harbor rare species. USFWS has similarly responded in a letter dated April 10, 2009. A response to comments was sent to DGIF March 17, 2009 and to USFWS July 13, 2009. See **Attachment I** for T&E Coordination Memos, screening results from the U.S. Fish and Wildlife Service, DGIF Virginia Fish and Wildlife Information Service, and DCR Natural Heritage Program, and related correspondence.
- b. Given the proximity to protected threatened and endangered aquatic species and the design flow of 0.10 MGD of this facility, reduced monitoring was not assessed for this facility at this time.
- c. The permit was not reissued prior to expiration (2004 permit expired on May 18, 2009). The application was deemed complete on February 18, 2009 which was beyond the 12/18/09 deadline for a complete application. Additional time was required to process the supplemental data submitted by the permittee (February 18, 2009) and to facilitate the Threatened and Endangered Species coordination process between DCR, DGIF and DEQ.
- d. The Virginia Department of Health's Office of Drinking Water reviewed the reissuance application and responded with comments on January 5, 2009 identifying the raw water intake for the GCWSA-Jarrett waterworks located approximately 26 miles downstream of the discharge and the raw water intake for the City of Norfolk waterworks located approximately 83 miles downstream of the discharge. VDH did not object to the permit but recommended Reliability Class of II for the facility which is in accordance with the 2009 permit reissuance.

25. 303(d) Listed Segments (TMDL):

The receiving stream was not assessed during the 2008 305(b)/303(d) Water Quality Assessment cycle, therefore the waters are considered Category 3A.

26. Attachments:

- A: Flow Frequency Determination Memorandum
- B: Wastewater Treatment Plant Schematic
- C: Location Map
- D: Planning Level Stream Sanitation Analysis (August 17, 1998)
- E: Inspection Report
- F: Facility Effluent Data Summary and Evaluation
- G: MSTRANTI Printout and MSTRANTI Data Source Report
- H: Table 2 from the Chowan River-Dismal Swamp Basins Water Quality Management Plan (April 1982)
- I: Threatened and Endangered Coordination Documents

Attachment A

Flow Frequency Determination Memorandum

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office
4949-A Cox Road Glen Allen, Virginia 23060

SUBJECT: Flow Frequency Determination / 303(d) Determination
Town of McKenney STP - VA0060402

TO: Tamira Cohen

FROM: Jennifer Palmore, P.G. *J.P.*

DATE: November 14, 2008

COPIES: File

The Town of McKenney's sewage treatment plant discharges to Great Creek in McKenney, VA. The discharge is located at rivermile 5AGRC001.92. Flow frequencies have been requested at this site for use in developing effluent limitations for the VPDES permit.

The Virginia DEQ conducted several flow measurements on Great Creek just upstream of the STP discharge from 1994 through 1997. The measurements were correlated with the same day daily mean values from the continuous record gage on the Nottoway River near Rawlings, VA (#02044500). The measurements and daily mean values were plotted on a logarithmic graph and a best fit power trendline was drawn through the data points. The required flow frequencies from the reference gage were plugged into the equation for the regression line and the associated flow frequencies for the measurement site were calculated. The flows at the measuring site and discharge point are considered equal. The data for the reference gauge, and the measuring/discharge point are presented below.

Nottoway River near Rawlings, VA (#02044500):

Drainage area = 309 mi²

Statistical period = 1951-2003

High Flow Months = January through May

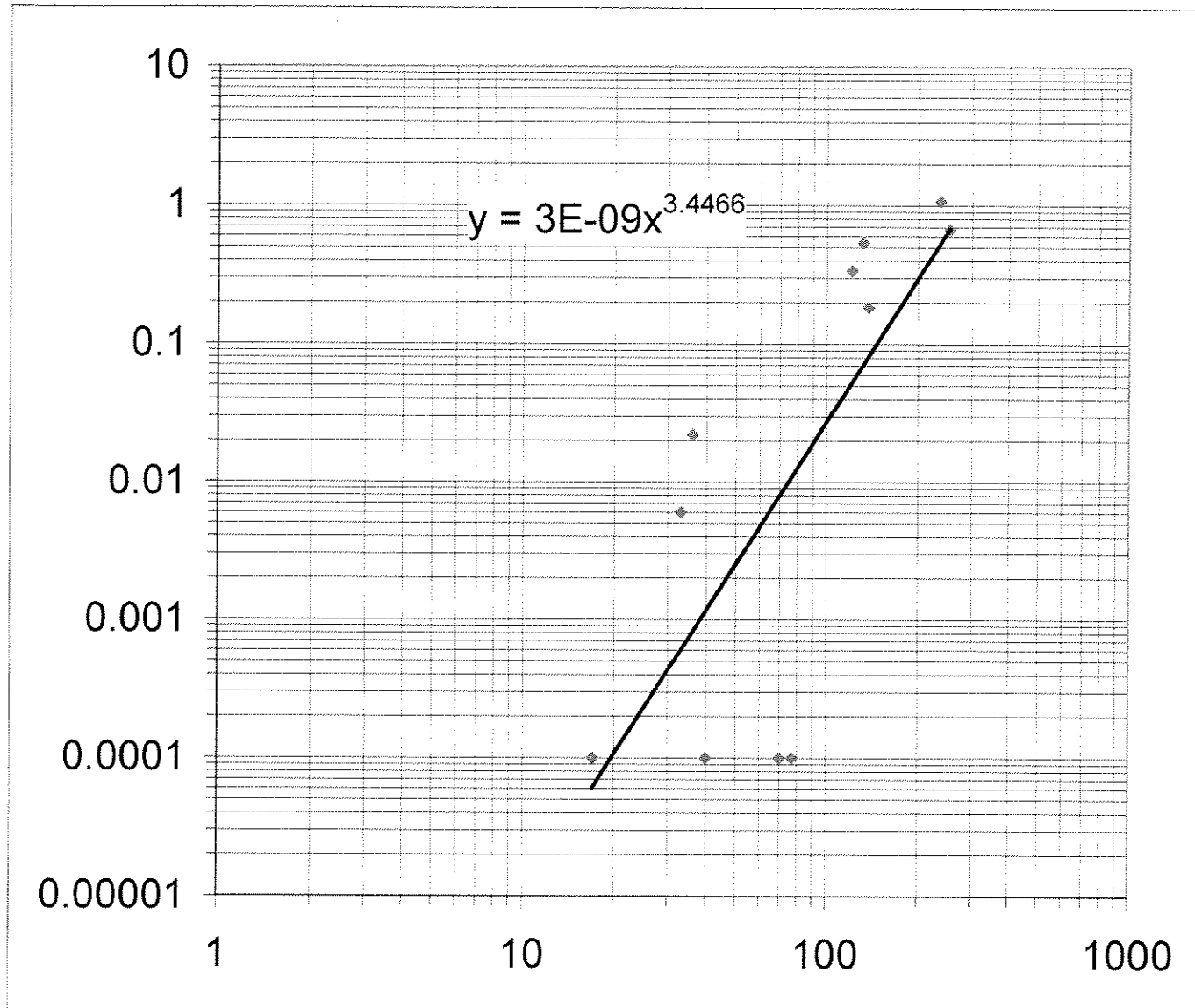
1Q30 = 1.2 cfs	High Flow 1Q10 = 63 cfs
1Q10 = 3.4 cfs	High Flow 7Q10 = 74 cfs
7Q10 = 4.6 cfs	High Flow 30Q10 = 109 cfs
30Q10 = 11 cfs	HM = 70 cfs
30Q5 = 19 cfs	

Great Creek above McKenney STP, near Rawlings, VA (#02044900):

Drainage Area = 3.84 mi²

1Q30 = 0.000 cfs (0.000 MGD)	High Flow 1Q10 = 0.005 cfs (0.003 MGD)
1Q10 = 0.000 cfs (0.000 MGD)	High Flow 7Q10 = 0.008 cfs (0.005 MGD)
7Q10 = 0.000 cfs (0.000 MGD)	High Flow 30Q10 = 0.032 cfs (0.021 MGD)
30Q10 = 0.000 cfs (0.000 MGD)	HM = 0.007 cfs (0.005 MGD)
30Q5 = 0.000 cfs (0.000 MGD)	

Great Creek above McKenney STP, near Rawlings, VA #02044900
vs Nottoway River near Rawlings, VA #02044500



Flow Data (cfs)

Date	Nottoway	Great
5/31/1994	137	0.184
7/12/1994	77	0.0001
9/19/1994	70	0.0001
4/19/1995	132	0.54
8/15/1995	40	0.0001
9/13/1995	17	0.0001
4/29/1996	254	0.676
5/14/1997	237	1.08
6/26/1997	121	0.339
9/3/1997	36	0.022
10/10/1997	33	0.006

Regression Statistics

Multiple R	0.906745
R Square	0.822186
Adjusted R Square	0.802429
Standard Error	0.161932
Observations	11

Flow Frequencies (cfs)

Nottoway		Great
1.2	1Q30	0.000
3.4	1Q10	0.000
4.6	7Q10	0.000
11	30Q10	0.000
19	30Q5	0.000
63	HF 1Q10	0.005
74	HF 7Q10	0.008
109	HF 30Q10	0.032
70	HM	0.007
309	DA (mi ²)	3.84

High Flow Months: Jan-May
Statistical period: 1951-2003

Changed from 0 to 0.0001 for graphing purposes

Great Creek was not assessed of any designated uses during the 2008 305(b) Water Quality Assessment; therefore it is considered a Category 3A water. During the 1998 planning level monitoring effort (van Soestbergen 8/17/98), Great Creek was determined to be a Tier 1 water.

The stream data collected at monitoring station 5AWAQ001.40 is attached. The station is located on Waqua Creek at the Route 712 bridge, which is located within the same watershed as Great Creek.

If you have any questions concerning this analysis, please let me know.

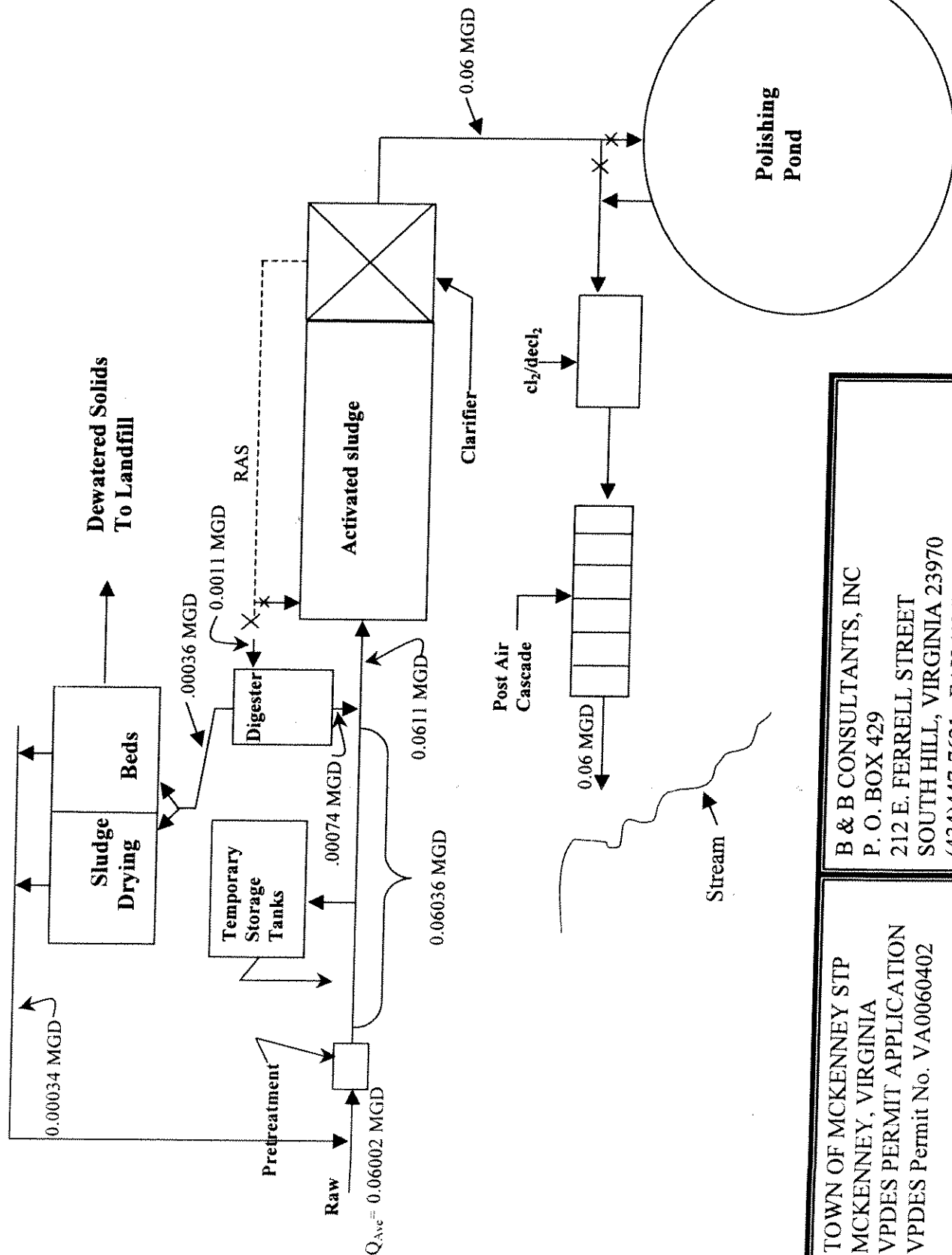
						00900	
						HARDNESS, TOTAL (MG/L AS CaCO3)	
						Value	Com Code
Sta Id	Collection Date Time	Depth Desc	Depth	Container	Comment		
5AWAQ001.40	09/14/1994 13:22	S	0.3	R	STORET DATA CONVERSION	20.0	
5AWAQ001.40	12/19/1994 11:34	S	0.3	R	STORET DATA CONVERSION	12.0	
5AWAQ001.40	03/08/1995 14:00	S	0.3	R	STORET DATA CONVERSION	12.0	
5AWAQ001.40	06/06/1995 12:00	S	0.3	R	STORET DATA CONVERSION	19.0	
5AWAQ001.40	09/06/1995 10:30	S	0.3	R	STORET DATA CONVERSION	21.0	
5AWAQ001.40	12/06/1995 16:40	S	0.3	R	STORET DATA CONVERSION	13.0	
5AWAQ001.40	03/28/1996 13:45	S	0.3	R	STORET DATA CONVERSION	22.0	
5AWAQ001.40	06/17/1996 12:33	S	0.3	R	STORET DATA CONVERSION	24.0	
5AWAQ001.40	09/12/1996 10:20	S	0.3	R	STORET DATA CONVERSION	26.0	
5AWAQ001.40	12/18/1996 10:34	S	0.3	R	STORET DATA CONVERSION	14.0	
5AWAQ001.40	03/11/1997 10:39	S	0.3	R	STORET DATA CONVERSION	16.3	
5AWAQ001.40	06/18/1997 10:50	S	0.3	R	STORET DATA CONVERSION	21.4	
5AWAQ001.40	08/05/1997 12:00	S	0.3	R	STORET DATA CONVERSION	21.3	
5AWAQ001.40	10/15/1997 12:44	S	0.3	R	STORET DATA CONVERSION	18.0	
5AWAQ001.40	12/16/1997 14:15	S	0.3	R	STORET DATA CONVERSION	23.2	
5AWAQ001.40	02/10/1998 13:15	S	0.3	R	STORET DATA CONVERSION	8.5	
5AWAQ001.40	04/09/1998 13:15	S	0.3	R	STORET DATA CONVERSION	23.1	
5AWAQ001.40	06/17/1998 09:45	S	0.3	R	STORET DATA CONVERSION	16.5	
5AWAQ001.40	08/26/1998 13:10	S	0.3	R	STORET DATA CONVERSION	21.1	
5AWAQ001.40	10/29/1998 13:15	S	0.3	R	STORET DATA CONVERSION	18.0	
5AWAQ001.40	12/17/1998 12:25	S	0.3	R	STORET DATA CONVERSION	14.4	
5AWAQ001.40	02/17/1999 11:45	S	0.3	R		40.0	
5AWAQ001.40	04/15/1999 14:22	S	0.3	R		16.0	
5AWAQ001.40	06/17/1999 13:00	S	0.3	R		16.8	
5AWAQ001.40	08/12/1999 12:25	S	0.3	R		16.6	
5AWAQ001.40	12/21/1999 13:22	S	0.3	R	FLOW ABOVE NORMAL	21.4	
5AWAQ001.40	02/24/2000 10:00	S	0.3	R		7.0	
5AWAQ001.40	04/17/2000 13:45	S	0.3	R		13.0	
5AWAQ001.40	06/26/2000 13:30	S	0.3	R		16.9	
5AWAQ001.40	08/14/2000 14:10	S	0.3	R	ABOVE NORMAL	12.7	
5AWAQ001.40	10/19/2000 13:40	S	0.3	R	NORMAL FLOW	11.1	
5AWAQ001.40	12/14/2000 12:40	S	0.3	R	NORMAL FLOW	11.1	
5AWAQ001.40	02/12/2001 12:15	S	0.3	R		10.4	
5AWAQ001.40	04/09/2001 11:35	S	0.3	R		5.0	
5AWAQ001.40	08/18/2003 11:25	S	0.3	R	NORMAL FLOW.	13.9	
5AWAQ001.40	10/09/2003 11:35	S	0.3	R	NORMAL FLOW.	10.6	
5AWAQ001.40	12/22/2003 11:55	S	0.3	R	NORMAL FLOW.	10.0	U
5AWAQ001.40	03/01/2004 11:15	S	0.3	R		14.2	
5AWAQ001.40	04/26/2004 12:30	S	0.3	R	NORMAL FLOW	18.1	
5AWAQ001.40	06/03/2004 10:50	S	0.3	R	NORMAL FLOW	20.0	
5AWAQ001.40	07/29/2004 11:35	S	0.3	R	ABOVE NORMAL FLOW; SLIGHTLY TURBID	12.2	
5AWAQ001.40	10/05/2004 16:00	S	0.3	R	NORMAL FLOW	15.0	
5AWAQ001.40	11/18/2004 11:35	S	0.3	R	NORMAL FLOW	15.0	
5AWAQ001.40	01/11/2005 10:55	S	0.3	R	NORMAL FLOW	14.0	
5AWAQ001.40	03/24/2005 12:00	S	0.3	S1		12.0	
Average						16.4	

Station ID	Collection Date Time	Depth Desc	Depth	Temp Celcius	Field Ph	Do Probe
5AWAQ001.40	9/14/1994	S	.30	17.17	6.87	5.37
5AWAQ001.40	12/19/1994	S	.30	6.46	6.75	11.50
5AWAQ001.40	3/8/1995	S	.30	13.73	6.67	9.61
5AWAQ001.40	6/6/1995	S	.30	21.09	6.57	7.40
5AWAQ001.40	6/6/1995	S	.40			
5AWAQ001.40	9/6/1995	S	.30	18.42	6.05	6.54
5AWAQ001.40	12/6/1995	S	.30	7.88	6.49	11.05
5AWAQ001.40	3/28/1996	S	.30	8.91	6.32	10.79
5AWAQ001.40	6/17/1996	S	.30	22.52	6.80	8.20
5AWAQ001.40	9/12/1996	S	.30	21.76	6.44	7.31
5AWAQ001.40	12/18/1996	S	.30	8.12	6.20	10.76
5AWAQ001.40	3/11/1997	S	.30	10.56	6.64	11.57
5AWAQ001.40	6/18/1997	S	.30	20.66	6.48	7.97
5AWAQ001.40	8/5/1997	S	.30	21.35	6.48	7.58
5AWAQ001.40	10/15/1997	S	.30	15.83	6.79	7.14
5AWAQ001.40	12/16/1997	S	.30	3.04	6.88	13.00
5AWAQ001.40	2/10/1998	S	.30	5.11	6.38	12.10
5AWAQ001.40	4/9/1998	S	.30	18.34	6.66	8.26
5AWAQ001.40	6/17/1998	S	.30	21.04	6.71	7.52
5AWAQ001.40	8/26/1998	S	.30	23.60	6.62	5.18
5AWAQ001.40	10/29/1998	S	.30	13.16	6.73	8.08
5AWAQ001.40	12/17/1998	S	.30	4.78	5.78	12.03
5AWAQ001.40	2/17/1999	S	.30	6.67	6.43	11.75
5AWAQ001.40	4/15/1999	S	.30	14.51	6.30	8.72
5AWAQ001.40	6/17/1999	S	.30	19.71	6.73	7.67
5AWAQ001.40	8/12/1999	S	.30	24.09	6.54	6.87
5AWAQ001.40	10/26/1999	S	.30	9.94	6.34	9.91
5AWAQ001.40	12/21/1999	S	.30	8.73	6.21	10.23
5AWAQ001.40	2/24/2000	S	.30			
5AWAQ001.40	4/17/2000	S	.30	18.15	6.43	8.78
5AWAQ001.40	6/26/2000	S	.30	25.44	6.92	6.58
5AWAQ001.40	8/14/2000	S	.30	22.11	8.41	9.03
5AWAQ001.40	10/19/2000	S	.30	14.76	6.40	8.88
5AWAQ001.40	12/14/2000	S	.30	4.28	6.93	12.70
5AWAQ001.40	2/12/2001	S	.30	5.51	6.87	11.78
5AWAQ001.40	4/9/2001	S	.30	19.08	6.38	8.12
5AWAQ001.40	8/18/2003	S	.30	23.02	6.76	7.30
5AWAQ001.40	10/9/2003	S	.30	17.15	6.59	8.48
5AWAQ001.40	12/22/2003	S	.30	2.59	6.61	13.25
5AWAQ001.40	3/1/2004	S	.30	8.39	6.49	12.36
5AWAQ001.40	4/26/2004	S	.30	19.32	6.92	7.89
5AWAQ001.40	6/3/2004	S	.30	20.53	6.56	7.77
5AWAQ001.40	7/29/2004	S	.30	24.24	6.41	6.29
5AWAQ001.40	10/5/2004	S	.30	17.72	6.96	8.23
5AWAQ001.40	11/18/2004	S	.30	9.34	6.86	10.05
5AWAQ001.40	1/11/2005	S	.30	6.64	6.86	11.34
5AWAQ001.40	3/24/2005	S	.00			
5AWAQ001.40	3/24/2005	S	.30			
90th Percentile				22.9	6.9	
10th Percentile				5.2	6.3	

Attachment B

Wastewater Treatment Plant Schematic

Process Schematic



TOWN OF MCKENNEY STP
MCKENNEY, VIRGINIA
VPDES PERMIT APPLICATION
VPDES Permit No. VA0060402

B & B CONSULTANTS, INC
P. O. BOX 429
212 E. FERRELL STREET
SOUTH HILL, VIRGINIA 23970
(434)447-7621 · FAX (434)447-4257
e-mail: bandb@bandbcons.com

Attachment C

Location Map

DELORME

Attachment D

Planning Level Stream Sanitation Analysis (August 17, 1998)

MEMORANDUM


DEPARTMENT OF ENVIRONMENTAL QUALITY *Piedmont Water Regional Office*

4949-A Cox Road, Glen Allen, VA 23060-6296

804/527-5020

SUBJECT: Planning Level Stream Sanitation Analysis
Discharge to Great Creek or to Nottoway River
Town of McKenney Municipal STP (VA0060402)

TO: Diane Cook

FROM: Jon van Soestbergen 

DATE: August 17, 1998

COPIES: Curt Linderman, VA0060402 Model File

A planning level stream sanitation analysis for the subject discharge was performed to determine whether the receiving stream is water quality limited, and if so, to determine the effluent limits necessary to maintain the dissolved oxygen (DO) standard in the receiving stream. At the request of the applicant, two separate discharge locations were analyzed. The first discharge scenario is to Great Creek at the existing discharge location (river mile 5AGRT001.92). The second discharge scenario is to the Nottoway River at river mile 5ANTW111.10, approximately at the old railroad grade indicated on the Warfield, VA topographic map (041A). The two discharge locations are in watershed VAP-K17R.

The analysis was performed to simulate the effects of an increase in the discharge flow from the existing municipal wastewater treatment facility from 0.1 mgd to 0.4 mgd. The current VPDES permitted effluent limits related to the DO standard are 25 mg/l BOD₅ and 6.6 mg/l DO. The existing discharge has not been previously modeled. The existing McKenney discharge to Great Creek is addressed in Table 2 of the April 1982 Chowan River-Dismal Swamp Basins Water Quality Management Plan.

A site visit to the existing discharge location was performed July 14, 1998. Great Creek at the discharge location was subject to backwater from a downstream beaver dam. The treatment plant operator indicated there were two additional beaver dams downstream along Great Creek prior to its confluence with the Nottoway River. The most upstream beaver dam is periodically breached by plant personnel to reduce backwater at the discharge location, which is believed to be a potential source of apparent Discharge Monitoring Report (DMR) exceedances of the VPDES permitted flow. The Nottoway River discharge location was not visited during the site visit. A file review indicated there is an existing discharge to the Nottoway River at river mile 108.94. This discharge is the Nottoway Motel & Restaurant (VA0028291), and is a potential competing user of the resource.

Because of the existing discharge, Great Creek was considered a Tier 1 water from the discharge location to its confluence with the Nottoway River. DEQ maintains an Ambient Water Quality Monitoring (AWQM) station on the Nottoway River at the Route 1 bridge (5ANTW109.02). Based on analysis of monitoring data from this AWQM station and a review of the most recent (1998) 305(b) report, the Nottoway River was considered a Tier 2 water in the modeled segment, and antidegradation was applied. Antidegradation was not applied in Great Creek because of its Tier 1 status.

Where appropriate, the Regional Model 3.2 was used for analysis. The existing 0.016 mgd discharge from the Nottoway Motel & Restaurant was considered in the analysis. The results of the stream sanitation analysis are as follows:

Discharge to Great Creek at River Mile 5AGRT001.92 (existing discharge location)

Paul Herman's June 22, 1998 flow frequency determination indicates that the 7Q10 flow in Great Creek at the discharge point is zero. Because of the beaver dams backwatering the affected stream segment, Great Creek was considered unmodelable using the Regional Model 3.2. The stream sanitation analysis was inconclusive as to whether Great Creek is water quality limited under the expanded discharge conditions. No attempt was made to predict critical flow stream conditions with the current discharge. It is recommended that VPDES permitted effluent limits for the control of oxygen demanding wastes related to maintaining the DO standard in Great Creek under critical (7Q10) conditions be established based on best professional judgment. Although the Great Creek stream segment is not a swamp, under similar situations where discharges to streams with no background 7Q10 flow could not be modeled using the Regional Model 3.2, PRO has set effluent limits at least as stringent as those set forth in A.J. Anthony's Swamp Limits memorandum (A.J. Anthony, 1987) which recommends the following limits, regardless of flow.

cBOD ₅ :	10.0 mg/l
TSS:	10.0 mg/l
TKN:	3.0 mg/l
Cl ₂ :	0.011 mg/l

Discharge to Nottoway River at River Mile 5ANTW111.10 (alternative discharge location)

This discharge alternative was modeled using the Regional Model 3.2, with antidegradation applied because of the segment's Tier 2 status. Background flows used were set equivalent to critical flows at the Nottoway River gauge near Rawlings, VA (#02044500), as reported by Paul Herman in his June 22, 1998 memorandum. Critical stream temperature was assumed to be 28 degrees C. A baseline model determined that the Nottoway River is not water quality limited downstream of the Nottoway Motel & Restaurant discharge. With the additional 0.4 mgd McKenney discharge, however, the model indicates the Nottoway River would be water quality limited for DO. The model predicts the following effluent limits would be necessary to ensure antidegradation is not violated in the modeled segment.

Flow:	0.40 mgd
cBOD ₅ :	3.0 mg/l
TKN:	3.0 mg/l
DO:	6.5 mg/l

The model predicts that DO concentrations decline downstream of the discharge, reach a minimum (sag point) 0.7 miles downstream of the discharge location, and fully recover approximately 2.2 miles downstream of the discharge location. The Nottoway River remains effluent limited downstream of the Nottoway Motel & Restaurant discharge.

Note that this modeling effort is for planning purposes only. Should an application for discharge to the Nottoway River be received, a site visit would be performed to verify applicability of the Regional Model 3.2. Additional data would also be obtained to better represent actual background conditions. Specifically, the critical 7Q10 flow and temperature for this modeling effort were both assumed, in all probability, more conservatively than projected values based on actual data would be.

A location map and model documentation is attached. Should you have any questions, please do not hesitate to ask.

Attachment E

Inspection Report

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Wastewater Facility Inspection Report

Revised 08/2001

Facility Name: <u>McKenney WWTP</u> City/County: <u>Dinwiddie</u> Inspection Date: <u>March 20, 2007</u> Inspector: <u>Mike Dare</u> Reviewed By: _____	Facility No.: <u>VA0060402</u> Inspection Agency: <u>DEQ</u> Date Form Completed: <u>March 21, 2007</u> Time Spent: <u>12 hrs. w/ travel & report</u> Unannounced Insp.? <u>Yes</u> FY-Scheduled Insp.? <u>Yes</u>
Present at Inspection: <u>John Stone</u>	
TYPE OF FACILITY: <div style="display: flex; justify-content: space-between;"> <div> <u>Domestic</u> <input type="checkbox"/> Federal <input type="checkbox"/> Major <input checked="" type="checkbox"/> Non-Federal <input checked="" type="checkbox"/> Minor </div> <div> <u>Industrial</u> <input type="checkbox"/> Major <input type="checkbox"/> Primary <input type="checkbox"/> Minor <input type="checkbox"/> Secondary </div> </div> Population Served: <u>approx.: 480</u> Number of Connections: <u>approx.:250</u>	
TYPE OF INSPECTION: <input checked="" type="checkbox"/> Routine Date of last inspection: <u>11/17/2004</u> <input type="checkbox"/> Compliance Agency: <u>DEQ/PRO</u> <input type="checkbox"/> Reinspection	
EFFLUENT MONITORING: December 2006: BOD: <u><QL</u> mg/L TSS: <u>1</u> mg/L Flow: <u>0.05</u> MGD (Effluent) Date: other: Ammonia <u>0.58</u> mg/L Quarter avg: (Oct-Dec) BOD: <u>5</u> mg/L TSS: <u>2.0</u> mg/L Flow: <u>0.072</u> MGD (Effluent) Date: other: Ammonia <u>0.75</u> mg/L	
CHANGES AND/OR CONSTRUCTION DATA VERIFIED IN PREFACE <input type="checkbox"/> Updated <input checked="" type="checkbox"/> No changes Has there been any new construction? <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No If yes, were plans and specifications approved? <input type="checkbox"/> Yes <input type="checkbox"/> No* <input checked="" type="checkbox"/> N/A DEQ approval date: <u>N/A</u>	

(A) PLANT OPERATION AND MAINTENANCE

1. Class and number of licensed operators: Class III - 2
2. Hours per day plant is staffed: 8 hours/day
3. Describe adequacy of staffing: ☐ Good ☒ Average ☐ Poor*
4. Does the plant have an established program for training personnel? ☒ Yes ☐ No
5. Describe the adequacy of the training program: ☒ Good ☐ Average ☐ Poor*
6. Are preventive maintenance tasks scheduled? ☒ Yes ☐ No*
7. Describe the adequacy of maintenance: ☒ Good ☐ Average ☐ Poor*
8. Does the plant experience any organic/hydraulic overloading? ☒ Yes* ☐ No

If yes, identify cause and impact on plant. Infiltration/Inflow – Plant is able to handle the additional flow.

9. Any bypassing since last inspection? ☐ Yes* ☒ No
10. Is the on-site electric generator operational? ☒ Yes ☐ No* ☐ N/A
11. Is the STP (**Chlorine**) alarm system operational? ☒ Yes ☐ No * ☐ N/A
12. How often is the standby generator exercised? ☐ Weekly ☒ Monthly ☐ Other:
 Power Transfer Switch? ☐ Weekly ☒ Monthly ☐ Other:
 Alarm System? (**Chlorine room**) ☐ Weekly ☒ Monthly ☐ Other:
13. When were the cross connection control devices last tested on the potable water service? 10/04
14. Is sludge disposed in accordance with the approved sludge disposal plan? ☒ Yes ☐ No* ☐ N/A
15. Is septage received by the facility? ☐ Yes ☒ No
 Is septage loading controlled? ☐ Yes ☐ No * ☒ N/A
 Are records maintained? ☐ Yes ☐ No* ☒ N/A
16. Overall appearance of facility: ☒ Good ☐ Average ☐ Poor*

Comments: Cross connection control device certification is out of date. This certification must be performed annually.

(B) PLANT RECORDS

1. Which of the following records does the plant maintain?
- | | | | |
|---|---|------------------------------|---|
| Operational Logs for each unit process | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Instrument maintenance and calibration | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Mechanical equipment maintenance | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Industrial waste contribution (Municipal Facilities) | <input type="checkbox"/> Yes | <input type="checkbox"/> No* | <input checked="" type="checkbox"/> N/A |
2. What does the operational log contain?
- | | | | |
|----------------------|---|---|------------------------------|
| Visual Observations | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Flow Measurement | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Laboratory Results | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Process Adjustments | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Control Calculations | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> N/A |
| Other: | | | |
3. What do the mechanical equipment records contain:
- | | | | |
|-----------------------------|---|------------------------------|------------------------------|
| As built plans and specs? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Spare parts inventory? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Manufacturers instructions? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Equipment/parts suppliers? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Lubrication schedules? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Other: | | | |
| Comments: | <u>None</u> | | |
4. What do the industrial waste contribution records contain:
- (Applicable to municipal facilities only)**
- | | | | |
|--------------------------------|------------------------------|------------------------------|---|
| Waste characteristics? | <input type="checkbox"/> Yes | <input type="checkbox"/> No* | <input checked="" type="checkbox"/> N/A |
| Locations and discharge types? | <input type="checkbox"/> Yes | <input type="checkbox"/> No* | <input checked="" type="checkbox"/> N/A |
| Impact on plant? | <input type="checkbox"/> Yes | <input type="checkbox"/> No* | <input checked="" type="checkbox"/> N/A |
| Other: | <u>N/A</u> | | |
| Comments: | <u>None</u> | | |
5. Are the following records maintained at the plant:
- | | | | |
|--------------------------------|---|------------------------------|---|
| Equipment maintenance records | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Operational Log | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Industrial contributor records | <input type="checkbox"/> Yes | <input type="checkbox"/> No* | <input checked="" type="checkbox"/> N/A |
| Instrumentation records | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| Sampling and testing records | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
6. Are records maintained at a different location?
Where are the records maintained?
- | | |
|------------------------------|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|------------------------------|--|
- All are available on site.
7. Were the records reviewed during the inspection?
- | | |
|---|-----------------------------|
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
|---|-----------------------------|
8. Are the records adequate and the O & M Manual current?
- | | | |
|---|------------------------------|------------------------------|
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
|---|------------------------------|------------------------------|
- O&M Manual date written: Updated in 1995
Date O DEQ approved O&M: 1/23/95
9. Are the records maintained for required 3-year period?
- | | |
|---|------------------------------|
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* |
|---|------------------------------|

Comments: None

(C) SAMPLING

- | | | | |
|--|---|------------------------------|------------------------------|
| 1. Are sampling locations capable of providing representative samples? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| 2. Do sample types correspond to those required by the permit? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| 3. Do sampling frequencies correspond to those required by the permit? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| 4. Are composite samples collected in proportion to flow? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| 5. Are composite samples refrigerated during collection? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| 6. Does plant maintain required records of sampling? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |
| 7. Does plant run operational control tests? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | <input type="checkbox"/> N/A |

Comments: None

(D) TESTING

1. Who performs the testing? ☒ Plant/ Lab
☐ Central Lab
☒ Commercial Lab – Name: **B&B Consultants, Inc.**

If plant performs any testing, complete 2-4.

2. What method is used for chlorine analysis? HACH DR-100
3. Is sufficient equipment available to perform required tests? ☒ Yes ☐ No* ☐ N/A
4. Does testing equipment appear to be clean and/or operable? ☒ Yes ☐ No* ☐ N/A

Comments: Please see enclosed DEQ Laboratory Inspection Report.

(E) FOR INDUSTRIAL FACILITIES W/ TECHNOLOGY BASED LIMITS N/A

1. Is the production process as described in the permit application? (If no, describe changes in comments)
☐ Yes ☐ No* ☒ N/A
2. Do products and production rates correspond to the permit application? (If no, list differences in comments section)
☐ Yes ☐ No* ☒ N/A
3. Has the State been notified of the changes and their impact on plant effluent?
☐ Yes ☐ No* ☒ N/A

FOLLOW UP TO COMPLIANCE RECOMMENDATIONS FROM THE November 17, 2004 DEQ INSPECTION:

1. There were no Compliance Recommendations in the November 17, 2004 Inspection report.

FOLLOW UP TO GENERAL RECOMMENDATIONS FROM THE November 17, 2004 DEQ INSPECTION:

1. Dispose of sludge currently stored on #3 sand filter. Rehabilitate #3 sandfilter to provide for extra sludge drying capacity. **(Sludge currently stockpiled on drying beds 1 and 3 awaiting transport.)**
2. Consider hiring a laborer or developing an operator Trainee to help perform non technical tasks thus freeing operator to perform required lab analysis and plant adjustments. **(Item not performed.)**
3. Consider installing remote telemetry at key locations in the plant that can alert the operator(s) of electrical or pump failure, etc. This (relatively inexpensive) technology is becoming common at most Wastewater Treatment Plants that aren't staffed 24/7. **(Item not performed.)**
4. If gas disinfection is to be maintained consider installing an automatic tank switching device to insure against periods of insufficient disinfection. **(Both the chlorine and sulfur dioxide systems are equipped with automatic tank switching devices.)**
5. Investigate alternative disinfection methods. Because of hazardous materials concerns, most wastewater treatment facilities of this size have changed from gas chlorine disinfection to liquid hypochlorite disinfection or to Ultraviolet light disinfection. **(Item not performed.)**
6. The path to the outfall is becoming overgrown. Take advantage of the winter months to clear the path. Regular inspection of the receiving stream is highly recommended and clearing the path will make this task much easier. **(The path to the outfall has been cleared and is easily traversed.)**

INSPECTION REPORT SUMMARY

Compliance Recommendations/Request for Corrective Action:

1. The final effluent flow meter has not been calibrated within the last year. This meter must be calibrated annually.
2. Cross connection control device certification is out of date. This certification must be performed annually.

General Recommendations/Observations/Comments:

1. Recommend proceeding as quickly as possible with plans to dispose of sludge currently stockpiled on drying beds No. 1 and 3. Recommend rehabilitation of these drying beds to provide for extra sludge drying capacity.
2. The single-wall vertically mounted and elevated generator fuel tank is showing signs of deterioration (especially evident on the belly of the tank). This Office recommends that this deterioration be investigated by qualified personnel and corrective measures taken if warranted.
3. Consider installing remote telemetry at key locations in the plant that can alert the operator(s) of electrical or pump failure, etc. This (relatively inexpensive) technology is becoming common at most Wastewater Treatment Plants that aren't staffed 24/7.
4. Investigate alternative disinfection methods. Because of hazardous materials concerns, most wastewater treatment facilities of this size have changed from gas chlorine disinfection to liquid hypochlorite disinfection or to Ultraviolet light disinfection.

Items evaluated during this inspection include (check all that apply):

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		Operational Units
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		O & M Manual
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		Maintenance Records
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	Pathogen Reduction & Vector Attraction Reduction
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	Sludge Disposal Plan
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	Groundwater Monitoring Plan
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	Storm Water Pollution Prevention Plan
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	Permit Special Conditions
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	Permit Water Quality Chemical Monitoring

UNIT PROCESS: Screening/Comminution

1. Number of units: Manual: 1 Mechanical: 1
 Number of units in operation: Manual: 1 Mechanical: 0

2. Bypass channel provided? ☒ Yes ☐ No
 Bypass channel in use? ☒ Yes ☐ No ☐ N/A

3. Area adequately ventilated? ☒ Yes ☐ No*

4. Alarm system for equipment failure or overloads? ☐ Yes ☒ No ☐ N/A
 If present, is the alarm system operational? ☐ Yes ☐ No * ☒ N/A

5. Proper flow-distribution between units? ☒ Yes ☐ No * ☐ N/A

6. How often are units checked and cleaned? at least once a day

7. Cycle of operation: continuous (comminutor currently out of service)

8. Volume of screenings removed: ~ 10 gal/wk

9. General condition: ☒ Good ☐ Fair ☐ Poor*

Comments: Motor for comminutor was damaged by a power surge. The motor was off-site for repair but expected to be returned the date of this inspection or soon thereafter.

UNIT PROCESS: Activated Sludge Aeration

1. Number of units: 2 dual trains in parallel
 Number of units in operation: 2
2. Mode of operation: extended aeration
3. Proper flow distribution between units? ☒ Yes ☐ No* ☐ N/A
4. Foam control operational? ☐ Yes ☐ No* ☒ N/A
5. Scum control operational? ☐ Yes ☐ No* ☒ N/A
6. Evidence of the following problems:
- a. Dead spots? ☐ Yes* ☒ No
 - b. Excessive foam? ☐ Yes* ☒ No
 - c. Poor aeration? ☐ Yes* ☒ No
 - d. Excessive aeration? ☐ Yes* ☒ No
 - e. Excessive scum? ☐ Yes* ☒ No
 - f. Aeration equipment malfunction? ☐ Yes* ☒ No
 - g. Other:
7. Mixed liquor characteristics (as available)
- | | |
|-------------------------|--|
| pH: <u> SU </u> | MLSS: |
| DO: <u> mg/L </u> | SDI: <u> N/A </u> |
| SVI: | Color: <u> Brown </u> |
| Odor: <u> earthy </u> | Settleability: <u> Tank #1: 350 ml/L; Tank #2: 320 ml/L </u> |
| | Other: |
8. Return/waste sludge:
- a. return rate: Continuous MGD
 - b. waste rate: Not measured MGD
 - c. frequency of wasting: ~10 min. per day per tank
9. Aeration system control: ☐ Time Clock ☐ Manual ☒ Continuous
☐ Other
10. Effluent control devices working properly (*oxidation ditches*)? ☐ Yes ☐ No ☒ N/A
11. General condition: ☒ Good ☐ Fair ☐ Poor *

Comments: None

UNIT PROCESS: Sedimentation

☐ Primary ☒ Secondary ☐ Tertiary

1. Number of units: 2
In operation: 2
2. Proper flow-distribution between units? ☒ Yes ☐ No* ☐ N/A
3. Signs of short-circuiting and/or overloads? ☐ Yes* ☒ No
4. Effluent weirs level? ☒ Yes ☐ No* ☐ N/A
Clean? ☒ Yes ☐ No*
5. Scum collection system working properly? ☒ Yes ☐ No* ☐ N/A
6. Sludge-collection system working properly? ☒ Yes ☐ No* ☐ N/A
7. Influent, effluent baffle systems working properly? ☒ Yes ☐ No* ☐ N/A
8. Chemical addition? ☐ Yes ☒ No
Chemicals: None
9. Effluent characteristics: Clear
10. General condition: ☒ Good ☐ Fair ☐ Poor*

Comments: None

UNIT PROCESS: Aerobic Digestion

1. Number of units: 2
 Number of units in operation: 2

2. Type of sludge treated: ☐ Primary ☒ WAS ☐ Other:

3. Frequency of sludge application to digesters: ~10 min. per day per tank

4. Supernatant return rate: periodic

5. pH adjustment provided? ☐ Yes ☒ No
 Utilized: ☐ Yes ☐ No ☒ N/A

6. Tank contents well-mixed and relatively free of odors? ☒ Yes ☐ No*

7. If diffused aeration is used, do diffusers require frequent cleaning? ☐ Yes ☐ No ☒ N/A

8. Location of supernatant return: ☐ Head ☐ Primary ☒ Other aeration basins

9. Process control testing: Not inspected
 - a. percent volatile solids: ☐ Yes _____ % ☐ No
 - b. pH: ☐ Yes _____ SU ☐ No
 - c. alkalinity: ☐ Yes _____ mg/L ☐ No
 - d. dissolved oxygen: ☐ Yes _____ mg/L ☐ No

10. Foaming problem present? ☐ Yes * ☒ No

11. Signs of short-circuiting or overloads?: ☐ Yes * ☒ No

12. General condition: ☒ Good ☐ Fair ☐ Poor*

Comments: None

UNIT PROCESS: Drying Beds

1. Number of units: 3
 Number of units in operation: 3
 Number of beds with sludge: 3
2. Cover in good condition? ☐ Yes ☐ No ☒ N/A
3. Typical sand depth in beds: ~ 10 to 12 inches (Bed #2)
4. Typical drying time: varies seasonally
5. Frequency of usage: as needed
6. Underflow recycle location: head of plant
7. Sludge distributed evenly across bed(s)? ☒ Yes ☐ No* ☐ N/A (Bed #2)
8. Following problems noted:
 - a. Odors? ☐ Yes* ☒ No
 - b. Flies? ☐ Yes* ☒ No
 - c. Weed growth? ☐ Yes* ☒ No
 - d. Leakage from bed(s)? ☐ Yes* ☒ No
9. If the facility does not have an approved sludge plan, what is the current method of sludge disposal?
The approved plan calls for landfill disposal (Atlantic Waste Disposal).
10. General condition: ☐ Good ☒ Fair ☐ Poor*

Comments: Recommend proceeding as quickly as possible with plans to dispose of sludge currently stockpiled on drying beds No. 1 and 3. Recommend rehabilitation of these drying beds to provide for extra sludge drying capacity.

UNIT PROCESS: Ponds/Lagoons

1. Type: ☐ Aerated ☐ Unaerated ☒ Polishing
2. No. of cells: 1
Number in Operation: 1
3. Color: ☐ Green ☐ D. Brown ☐ L. Brown ☐ Grey
☒ Other More than half of pond covered w/ duckweed
4. Odor: ☐ Septic * ☐ Earthy ☒ None
☐ Other:
5. System operated in: ☐ Series ☐ Parallel ☒ N/A
6. If aerated, are lagoon contents mixed adequately? ☐ Yes ☐ No * ☒ N/A
7. If aerated, is aeration system operating properly? ☐ Yes ☐ No * ☒ N/A
8. Evidence of following problems:
a. Vegetation in lagoon or dikes? ☐ Yes * ☒ No
b. Rodents burrowing on dikes? ☐ Yes * ☒ No
c. Erosion? ☐ Yes * ☒ No
d. Sludge bars? ☐ Yes * ☒ No
e. Excessive foam? ☐ Yes * ☒ No
f. Floating material? ☐ Yes * ☒ No
9. Fencing intact? ☒ Yes ☐ No *
10. Grass maintained properly: ☒ Yes ☐ No
11. Level control valves working properly? ☒ Yes ☐ No * ☐ N/A
12. Effluent discharge elevation: ☐ Top ☒ Middle ☐ Bottom
13. Available freeboard: Approx. 4 ft.
14. Appearance of effluent: ☒ Good ☐ Fair ☐ Poor *
15. Are monitoring wells present? ☐ Yes ☒ No
Are wells adequately protected from runoff? ☐ Yes ☐ No * ☒ N/A
Are caps on and secured? ☐ Yes ☐ No * ☒ N/A
16. General condition: ☒ Good ☐ Fair ☐ Poor*

Comments: None

UNIT PROCESS: Chlorination

1. Number of chlorinators: 2
Number in operation: 1
2. Number of evaporators: 0
Number in operation: 0
3. Number of chlorine contact tanks: 2
Number in operation: 2
4. Proper flow-distribution between units? ☒ Yes ☐ No * ☐ N/A
5. How is chlorine introduced into the wastewater? ☒ Perforated diffusers
☐ Injector with single entry point
☐ Other
6. Chlorine residual in basin effluent: 3.2 mg/L
7. Applied chlorine dosage: 4.5 lbs/d
8. Contact basins adequately baffled? ☒ Yes ☐ No * ☐ N/A
9. Adequate ventilation in:
 - a. Chemical storage area? ☒ Yes ☐ No * ☐ N/A
 - b. Equipment room? ☒ Yes ☐ No * ☐ N/A
10. Proper safety precautions used? ☒ Yes ☐ No *
11. General condition: ☒ Good ☐ Fair ☐ Poor*

Comments: Suggestion: Investigate alternative disinfection methods. Because of hazardous materials concerns, most wastewater treatment facilities of this size have changed from gas chlorination to liquid hypochlorite disinfection or to Ultraviolet light disinfection.

UNIT PROCESS: Dechlorination

1. Chemical used: ☒ Sulfur Dioxide ☐ Bisulfite ☐ Other
2. Number of sulfonators: 2
Number in operation: 1
3. Number of evaporators: 0
Number in operation: 0
4. Number of chemical feeders:
Number in operation:
5. Number of contact tanks: 0
Number in operation: 0
6. Proper flow-distribution between units? ☐ Yes ☐ No * ☒ N/A
7. How is chemical introduced? ☒ Perforated diffusers
☐ Injector with single entry point
☐ Other
8. Control system operational? ☒ Yes ☐ No *
a. Residual analyzers? ☐ Yes ☐ No * ☒ N/A
b. System adjusted: ☐ Automatic ☒ Manual ☐ Other:
9. Applied dechlorinating dose: 4 lbs/day
10. Chlorine residual in basin effluent: 0 mg/L at Plant effluent
11. Contact basins adequately baffled? ☐ Yes ☐ No * ☒ N/A
12. Adequate ventilation in:
a. Chemical storage area? ☒ Yes ☐ No *
b. Equipment room? ☒ Yes ☐ No *
13. Proper safety precautions used? ☒ Yes ☐ No *
14. General condition: ☒ Good ☐ Fair ☐ Poor*

Comments: None

UNIT PROCESS: Post Aeration

1. Number of units: 1
 Number of units in operation: 1
2. Proper flow-distribution between units? ☐ Yes ☐ No* ☒ N/A
3. Evidence of following problems:
- a. Dead spots? ☐ Yes* ☒ No
- b. Excessive foam? ☐ Yes* ☒ No
- c. Poor aeration? ☐ Yes* ☒ No
- d. Mechanical equipment failure? ☐ Yes* ☐ No ☒ N/A
4. How is the aerator controlled? ☐ Time clock ☐ Manual ☒ Continuous
☐ Other _____ ☒ N/A
5. What is the current operating schedule? Continuous – step cascade
6. Step weirs level? ☒ Yes ☐ No* ☐ N/A
7. Effluent D.O. level: not checked mg/L
8. General condition: ☒ Good ☐ Fair ☐ Poor*

Comments: None

UNIT PROCESS: Flow Measurement**(VPDES Outfall No. 001)**

1. Type measuring device: v-notch weir & stilling well w/chart recorder & totalizer
2. Present reading: 0.04 MGD (10:10 AM)
3. Bypass channel?
Metered? ☐ Yes ☒ No
☐ Yes ☐ No* ☒ N/A
4. Return flows discharged upstream from meter?
If Yes, identify: ☐ Yes ☒ No
N/A
5. Device operating properly? ☒ Yes ☐ No*
6. Date of last calibration: unknown
7. Evidence of following problems:
a. Obstructions? ☐ Yes* ☒ No
b. Grease? ☐ Yes* ☒ No
8. General condition: ☒ Good ☐ Fair ☐ Poor*

Comments: The final effluent flow meter has not been calibrated within the last year. This meter must be calibrated annually.

UNIT PROCESS: VPDES Outfall No.

1. Type outfall: ☒ Shore based ☐ Submerged
2. Type if shore based: ☐ Wingwall ☒ Headwall ☐ Rip Rap ☐ N/A
3. Flapper valve? ☒ Yes ☐ No (Flapper is in "up" position)
4. Erosion of bank? ☐ Yes* ☒ No ☐ N/A
5. Effluent plume visible? ☐ Yes * ☒ No

Comments: Receiving stream clear.

6. Condition of outfall and supporting structures: ☒ Good ☐ Fair ☐ Poor *
7. Final effluent, evidence of following problems:
a. Oil sheen? ☐ Yes* ☒ No
b. Grease? ☐ Yes* ☒ No
c. Sludge bar? ☐ Yes* ☒ No
d. Turbid effluent? ☐ Yes* ☒ No
e. Visible foam? ☐ Yes* ☒ No
f. Unusual odor? ☐ Yes* ☒ No

Comments: Effluent clear.

Attachment F

Facility Effluent Data Summary and Evaluation

Attachment F
McKenney STP - Facility Effluent Data Summary and Evaluation (DMR Data)

Dates	AVG Flow (MGD)	MAX Flow (MGD)	MIN pH (s.u.)	MAX pH (s.u.)	AVG BOD ₅ (KG/D)	MAX BOD ₅ (KG/D)	AVG BOD ₅ (MG/L)	MAX BOD ₅ (MG/L)	AVG TSS (KG/D)	MAX TSS (KG/D)	AVG TSS (MG/L)	MAX TSS (MG/L)	MIN DO (MG/L)	NH ₃ (MG/L)
10-Jan-2006	0.072	0.138	6.0	6.8	1.3	1.5	5	5	1.4	3	5.5	12	8.5	0.2
10-Feb-2006	0.076	0.104	6.0	6.6	1.5	1.9	5	5	2.1	4.2	5.2	11	9.1	0.2
10-Mar-2006	0.066	0.097	6.0	6.4	1.3	1.5	5	5	0.9	1.8	3.5	7	9.4	0.2
10-Apr-2006	0.052	0.063	6.1	6.5	1	1.2	5	5	0.5	0.6	2	3	7.1	0.2
10-May-2006	0.051	0.11	6.0	6.5	1	1.2	5	5	0.5	0.6	2.3	3	6.8	0.38
10-Jun-2006	0.056	0.104	6.0	6.4	1.3	2	5.2	6	1.1	2.4	4.2	6	6.8	2.1
10-Jul-2006	0.053	0.108	6.0	6.7	1.1	1.4	5	6	0.9	1.2	4	6	6.6	0.2
10-Aug-2006	0.065	0.099	6.0	6.6	0.8	0.9	4.8	5	0.5	0.6	3.3	4	6.6	2
10-Sep-2006	0.048	0.077	6.0	6.5	0.9	1	5	5	0.5	0.7	3	4	6.6	0.2
10-Oct-2006	0.051	0.0138	6.0	6.5	0.8	0.9	5	5	0.7	0.8	5	6	6.6	0.2
10-Nov-2006	0.076	0.144	6.0	6.5	1.3	1.6	5	5	0.4	0.7	1.8	4	6.6	1.4
10-Dec-2006	0.141	0.09	6.0	6.4	1.5	2.5	5	5	5	NS	10	3.3	7.3	0.26
10-Jan-2007	0.05	0.109	6.0	6.2	1.2	2.1	5	5	0.3	0.4	1.3	2	7.2	0.58
10-Feb-2007	0.063	0.129	6.0	6.3	1.4	2.4	5	5	1.4	4.9	3.6	10	7.1	0.57
10-Mar-2007	0.051	0.104	6.0	6.5	1	1.3	5	5	0.4	0.8	3	2	7.9	0.84
10-Apr-2007	0.058	0.117	6.0	6.4	1.2	1.5	5.8	8	0.6	1	3	5	6.6	0.77
10-May-2007	0.049	0.091	6.0	6.3	0.9	1.3	<QL	<QL	1	3.3	4.5	13	6.6	2
10-Jun-2007	0.047	0.103	6.0	6.3	0.8	0.9	<QL	<QL	0.3	0.5	1.6	3	6.6	0.2
10-Jul-2007	0.044	0.116	6.0	6.6	1.2	2.2	2.8	11	2.5	0.9	4	12	6.7	2.7
10-Aug-2007	0.05	0.064	6.0	6.7	NS	NS	<QL	<QL	0.3	0.7	1	3	6.6	0.33
10-Sep-2007	0.057	0.125	6.0	6.7	1.1	1.2	<QL	<QL	0.2	0.2	1	1	6.6	0.04
10-Oct-2007	0.05	0.069	6.0	6.5	1	1.2	<QL	<QL	0.5	1	5	23	6.7	0.2
10-Nov-2007	0.054	0.151	6.0	6.5	0.9	1	<QL	<QL	0.3	0.9	1	5	6.7	0.2
10-Dec-2007	0.049	0.061	6.0	6.4	<QL	<QL	<QL	<QL	0.4	0.4	1.5	2	7.3	0.2
10-Jan-2008	0.052	0.186	6.0	6.3	0.3	0.9	1.3	5	0.7	1.2	4.3	9	7.2	<QL
10-Feb-2008	0.038	0.083	6.0	6.2	<QL	<QL	<QL	<QL	0.5	0.8	3.8	5	8.2	2
10-Mar-2008	0.044	0.142	6.0	6.2	<QL	<QL	<QL	<QL	0.4	1.2	2.5	6	8.7	<QL
10-Apr-2008	0.061	0.263	6.0	6.2	<QL	<QL	<QL	<QL	0.7	1.4	3	6	8.2	<QL
10-May-2008	0.09	0.286	6.0	6.4	<QL	<QL	<QL	<QL	3.7	9.7	7.4	22	7.8	0.4
10-Jun-2008	0.065	0.222	6.0	6.1	<QL	<QL	<QL	<QL	1.9	6.4	4.3	12	7.2	0.2
10-Jul-2008	0.04	0.055	6.0	6.3	0.4	1.6	2.5	10	0.4	0.7	2.3	4	6.6	0.28
10-Aug-2008	0.039	0.078	6.0	6.6	<QL	<QL	<QL	<QL	0.9	2	6.6	14	6.6	0.42
10-Sep-2008	0.037	0.146	6.0	6.3	0.2	0.6	1.3	5	1.3	2.3	10.5	19	6.6	0.26
10-Oct-2008	0.066	0.236	6.0	6.1	<QL	<QL	<QL	<QL	0.4	1.1	2	5	7	0.2
10-Nov-2008	0.038	0.059	6.0	6.3	<QL	<QL	<QL	<QL	0.3	0.5	1.5	3	7.3	0.2
10-Dec-2008	0.047	0.26	6.0	6.3	<QL	<QL	<QL	<QL	0.3	0.4	2	2	7.2	0.2
AVG	0.06	0.12	6.00	6.42	1.02	1.43	4.44	5.80	0.95	1.69	3.63	7.15	7.20	0.62
MAX	0.14	0.29	6.10	6.80	1.50	2.50	5.80	11.00	5.00	9.70	10.50	23.00	9.40	2.70
MIN	0.04	0.01	6.00	6.10	0.20	0.60	1.30	5.00	0.20	0.20	1.00	1.00	6.60	0.04
90th percentile	0.07	0.23	6.00	6.65	1.36	2.16	5.02	8.20	2.00	3.84	6.05	13.50	8.35	2.00
10th percentile	0.04	0.06	6.00	6.20	0.56	0.90	2.38	5.00	0.30	0.44	1.40	2.00	6.60	0.20

STATS.exe Output: Facility = McKenney STP

<p>Chemical = TRC Chronic averaging period = 4 WLAa = 0.019 mg/L WLAc = 0.011 mg/L Q.L. = 0.10 mg/L # samples/mo. = 90 # samples/wk. = 7</p> <p>Summary of Statistics: # observations = 1 Expected Value = 20 Variance = 144 C.V. = 0.6 97th percentile daily values = 48.6683 97th percentile 4 day average = 33.2758 97th percentile 30 day average = 24.1210 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data</p> <p>A limit is needed based on Chronic Toxicity Average Weekly limit = 0.00837736286379463 mg/L Average Monthly Limit = 0.0073979363987211 mg/L</p> <p>The data are: 20 mg/L</p>	<p>Chemical = Ammonia Chronic averaging period = 30 WLAa = 45.7 mg/L WLAc = 3.74 mg/L Q.L. = 0.20 mg/L # samples/mo. = 4 # samples/wk. = 1</p> <p>Summary of Statistics: # observations = 1 Expected Value = 9 Variance = 29.16 C.V. = 0.6 97th percentile daily values = 21.9007 97th percentile 4 day average = 14.9741 97th percentile 30 day average = 10.8544 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data</p> <p>A limit is needed based on Chronic Toxicity Average Weekly limit = 7.546086149377 mg/L Average Monthly Limit = 7.546086149377 mg/L</p> <p>The data are: 9.00 mg/L</p>
<p>Chemical = Copper Chronic averaging period = 4 WLAa = 0.0093 mg/L WLAc = 0.0064 mg/L Q.L. = 0.005 mg/L # samples/mo. = 1 # samples/wk. = 1</p> <p>Summary of Statistics: # observations = 11 Expected Value = 0.007 Variance = 0.000017 C.V. = 0.6 97th percentile daily values = 0.017033 97th percentile 4 day average = 0.011646 97th percentile 30 day average = 0.08442 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data</p> <p>A limit is needed based on Acute Toxicity Average Weekly limit = 0.0093 mg/L Average Monthly Limit = 0.0093 mg/L</p> <p>The data (in mg/L) are: 0.0070</p> <p>Note: Additional data provided by the facility Feb. 18, 2009 were total copper concentrations and therefore not used in the limit evaluation. Given the VA Water Quality Criteria is in the dissolved form for copper, only the initial dissolved copper data provided in the application (received November 3, 2008) was used as per current agency guidance (DEQ GM00-2011).</p>	<p>Chemical = Zinc Chronic averaging period = 4 WLAa = 0.085 mg/L WLAc = 0.085 mg/L Q.L. = 0.005 mg/L # samples/mo. = 1 # samples/wk. = 1</p> <p>Summary of Statistics: # observations = 1 Expected Value = 0.025 Variance = 0.225 C.V. = 0.6 97th percentile daily values = 0.0608354 97th percentile 4 day average = 0.0415947 97th percentile 30 day average = 0.0301513 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data</p> <p>No Limit is required for this material.</p> <p>The data are: 0.025 mg/L</p>

Chemical = Chlorides

Chronic averaging period = 4

WLAa = 860 mg/L

WLAc = 230 mg/L

Q.L. = 1 mg/L

samples/mo. = 1

samples/wk. = 1

Summary of Statistics:

observations = 1

Expected Value = 44

Variance = 696.96

C.V. = 0.6

97th percentile daily values = 107.070

97th percentile 4 day average = 73.2067

97th percentile 30 day average = 53.0663

< Q.L. = 0

Model used = BPJ Assumptions, type 2 data

No Limit is required for this material.

The data are: 44 mg/L

Data for Copper, Zinc, and Chlorides obtained from application submitted November 3, 2008 (Attachment A – DEQ Water Quality Criteria Monitoring). All other parameters required with the application were below QLs. All parameters with data below DEQ required quantification limits are considered absent from the discharge for the purposes of this evaluation.

Attachment G

MSTRANTI Printout and MSTRANTI Data Source Report

MSTRANTI DATA SOURCE REPORT

Stream information	
Mean Hardness	Used data from adjacent stream. See Attachment A.
90% Temperature (annual)	Used data from adjacent stream. See Attachment A.
90% Temperature (wet season)	Not applicable as there are no tiered permit limits.
90% Maximum pH	Used data from adjacent stream. See Attachment A.
10% Maximum pH	Used data from adjacent stream. See Attachment A.
Tier Designation	Tier Determination (Item 14 in Fact Sheet)
Stream Flows	
All Data	See flow frequencies (Item 5 in Fact Sheet)
Mixing Information	
All Data	Discharge is to intermittent stream (no flow in low flow or dry conditions). 100% effluent in receiving stream is therefore assumed.
Effluent Information	
Mean Hardness	Provided by permittee via email dated January 15, 2009.
90% Temperature	Effluent data used from application. Maximum temperature used as a conservative measure.
90% Maximum pH	Effluent data used from DMRs.
10% Maximum pH	Effluent data used from DMRs.
Discharge flow	Design flow obtained from permit application

Data Location:

Flow Frequency Description – Attachment A
 Effluent Data – Attachment F

FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: McKenney WWTP Permit No.: VA0060402
 Receiving Stream: Great Creek Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information		Stream Flows		Mixing Information		Effluent Information	
Mean Hardness (as CaCO ₃) =	16.4 mg/L	1Q10 (Annual) =	0 MGD	Annual - 1Q10 Mix =	100 %	Mean Hardness (as CaCO ₃) =	68 mg/L
90% Temperature (Annual) =	22.9 deg C	7Q10 (Annual) =	0 MGD	- 7Q10 Mix =	100 %	90% Temp (Annual) =	23.1 deg C
90% Temperature (Wet season) =	deg C	3Q10 (Annual) =	0 MGD	- 3Q10 Mix =	100 %	90% Temp (Wet season) =	21.4 deg C
90% Maximum pH =	6.9 SU	1Q10 (Wet season) =	0.003 MGD	Wet Season - 1Q10 Mix =	100 %	90% Maximum pH =	6.65 SU
10% Maximum pH =	6.3 SU	3Q10 (Wet season) =	0.021 MGD	- 3Q10 Mix =	100 %	10% Maximum pH =	6.2 SU
Tier Designation (1 or 2) =	1	3Q05 =	0 MGD			Discharge Flow =	0.1 MGD
Public Water Supply (PWS) Y/N? =	n	Harmonic Mean =	0.005 MGD				
Trout Present Y/N? =	n	Annual Average =	MGD				
Early Life Stages Present Y/N? =	y						

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenaphthene	0	--	--	na	2.7E+03	--	--	na	2.7E+03	--	--	--	--	--	--	--	--	--	--	na	2.7E+03
Acrolein	0	--	--	na	7.8E+02	--	--	na	7.8E+02	--	--	--	--	--	--	--	--	--	--	na	7.8E+02
Acrylonitrile ^C	0	--	--	na	6.9E+00	--	--	na	6.9E+00	--	--	--	--	--	--	--	--	--	--	na	6.9E+00
Aldrin ^C	0	3.0E+00	--	na	1.4E-03	3.0E+00	--	na	1.5E-03	--	--	--	--	--	--	--	--	3.0E+00	--	na	1.5E-03
Ammonia-N (mg/l) (Yearly)	0	4.57E+01	3.74E+00	na	--	4.6E+01	3.7E+00	na	--	--	--	--	--	--	--	--	--	4.6E+01	3.7E+00	na	--
Ammonia-N (mg/l) (High Flow)	0	4.56E+01	5.27E+00	na	--	4.7E+01	6.4E+00	na	--	--	--	--	--	--	--	--	--	4.7E+01	6.4E+00	na	--
Anthracene	0	--	--	na	1.1E+05	--	--	na	1.1E+05	--	--	--	--	--	--	--	--	--	--	na	1.1E+05
Antimony	0	--	--	na	4.3E+03	--	--	na	4.3E+03	--	--	--	--	--	--	--	--	--	--	na	4.3E+03
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene ^C	0	--	--	na	7.1E+02	--	--	na	7.5E+02	--	--	--	--	--	--	--	--	--	--	na	7.8E+02
Benzidine ^C	0	--	--	na	5.4E-03	--	--	na	5.7E-03	--	--	--	--	--	--	--	--	--	--	na	5.7E-03
Benzo (a) anthracene ^C	0	--	--	na	4.9E-01	--	--	na	5.1E-01	--	--	--	--	--	--	--	--	--	--	na	5.1E-01
Benzo (b) fluoranthene ^C	0	--	--	na	4.9E-01	--	--	na	5.1E-01	--	--	--	--	--	--	--	--	--	--	na	5.1E-01
Benzo (k) fluoranthene ^C	0	--	--	na	4.9E-01	--	--	na	5.1E-01	--	--	--	--	--	--	--	--	--	--	na	5.1E-01
Benzo (a) pyrene ^C	0	--	--	na	4.9E-01	--	--	na	5.1E-01	--	--	--	--	--	--	--	--	--	--	na	5.1E-01
Bis(2-Chloroethyl) Ether	0	--	--	na	1.4E+01	--	--	na	1.4E+01	--	--	--	--	--	--	--	--	--	--	na	1.4E+01
Bis(2-Chloroisopropyl) Ether	0	--	--	na	1.7E+05	--	--	na	1.7E+05	--	--	--	--	--	--	--	--	--	--	na	1.7E+05
Bromoform ^C	0	--	--	na	3.6E+03	--	--	na	3.8E+03	--	--	--	--	--	--	--	--	--	--	na	3.8E+03
Butylbenzylphthalate	0	--	--	na	5.2E+03	--	--	na	5.2E+03	--	--	--	--	--	--	--	--	--	--	na	5.2E+03
Cadmium	0	2.5E+00	8.4E-01	na	--	2.5E+00	8.4E-01	na	--	--	--	--	--	--	--	--	--	2.5E+00	8.4E-01	na	--
Carbon Tetrachloride ^C	0	--	--	na	4.4E+01	--	--	na	4.6E+01	--	--	--	--	--	--	--	--	--	--	na	4.6E+01
Chlordane ^C	0	2.4E+00	4.3E-03	na	2.2E-02	2.4E+00	4.3E-03	na	2.3E-02	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	na	2.3E-02
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	na	--
Chlorobenzene	0	--	--	na	2.1E+04	--	--	na	2.1E+04	--	--	--	--	--	--	--	--	--	--	na	2.1E+04

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane ^c	0	--	--	na	3.4E+02	--	--	na	3.6E+02	--	--	--	--	--	--	--	--	--	--	na	3.6E+02
Chloroform ^c	0	--	--	na	2.9E+04	--	--	na	3.0E+04	--	--	--	--	--	--	--	--	--	--	na	3.0E+04
2-Chloronaphthalene	0	--	--	na	4.3E+03	--	--	na	4.3E+03	--	--	--	--	--	--	--	--	--	--	na	4.3E+03
2-Chlorophenol	0	--	--	na	4.0E+02	--	--	na	4.0E+02	--	--	--	--	--	--	--	--	--	--	na	4.0E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	8.3E-02	4.1E-02	na	--
Chromium III	0	4.2E+02	5.4E+01	na	--	4.2E+02	5.4E+01	na	--	--	--	--	--	--	--	--	--	4.2E+02	5.4E+01	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.6E+01	1.1E+01	na	--
Chromium, Total	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Chrysene ^c	0	--	--	na	4.9E-01	--	--	na	5.1E-01	--	--	--	--	--	--	--	--	--	--	na	5.1E-01
Copper	0	9.3E+00	6.4E+00	na	--	9.3E+00	6.4E+00	na	--	--	--	--	--	--	--	--	--	9.3E+00	6.4E+00	na	--
Cyanide	0	2.2E+01	5.2E+00	na	2.2E+05	2.2E+01	5.2E+00	na	2.2E+05	--	--	--	--	--	--	--	--	2.2E+01	5.2E+00	na	2.2E+05
DDD ^c	0	--	--	na	8.4E-03	--	--	na	8.8E-03	--	--	--	--	--	--	--	--	--	--	na	8.8E-03
DDE ^c	0	--	--	na	5.9E-03	--	--	na	6.2E-03	--	--	--	--	--	--	--	--	--	--	na	6.2E-03
DDT ^c	0	1.1E+00	1.0E-03	na	5.9E-03	1.1E+00	1.0E-03	na	6.2E-03	--	--	--	--	--	--	--	--	1.1E+00	1.0E-03	na	6.2E-03
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Dibenz(a,h)anthracene ^c	0	--	--	na	4.9E-01	--	--	na	5.1E-01	--	--	--	--	--	--	--	--	--	--	na	5.1E-01
Dibutyl phthalate	0	--	--	na	1.2E+04	--	--	na	1.2E+04	--	--	--	--	--	--	--	--	--	--	na	1.2E+04
Dichloromethane (Methylene Chloride) ^c	0	--	--	na	1.6E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
1,2-Dichlorobenzene	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
1,3-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	2.6E+03	--	--	--	--	--	--	--	--	--	--	na	2.6E+03
1,4-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	2.6E+03	--	--	--	--	--	--	--	--	--	--	na	2.6E+03
3,3-Dichlorobenzidine ^c	0	--	--	na	7.7E-01	--	--	na	8.1E-01	--	--	--	--	--	--	--	--	--	--	na	8.1E-01
Dichlorobromomethane ^c	0	--	--	na	4.6E+02	--	--	na	4.8E+02	--	--	--	--	--	--	--	--	--	--	na	4.8E+02
1,2-Dichloroethane ^c	0	--	--	na	9.9E+02	--	--	na	1.0E+03	--	--	--	--	--	--	--	--	--	--	na	1.0E+03
1,1-Dichloroethylene	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
1,2-trans-dichloroethylene	0	--	--	na	1.4E+05	--	--	na	1.4E+05	--	--	--	--	--	--	--	--	--	--	na	1.4E+05
2,4-Dichlorophenol	0	--	--	na	7.9E+02	--	--	na	7.9E+02	--	--	--	--	--	--	--	--	--	--	na	7.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,2-Dichloropropane ^c	0	--	--	na	3.9E+02	--	--	na	4.1E+02	--	--	--	--	--	--	--	--	--	--	na	4.1E+02
1,3-Dichloropropene	0	--	--	na	1.7E+03	--	--	na	1.7E+03	--	--	--	--	--	--	--	--	--	--	na	1.7E+03
Dieldrin ^c	0	2.4E-01	5.6E-02	na	1.4E-03	2.4E-01	5.6E-02	na	1.5E-03	--	--	--	--	--	--	--	--	2.4E-01	5.6E-02	na	1.5E-03
Diethyl Phthalate	0	--	--	na	1.2E+05	--	--	na	1.2E+05	--	--	--	--	--	--	--	--	--	--	na	1.2E+05
Di-2-Ethylhexyl Phthalate ^c	0	--	--	na	5.9E+01	--	--	na	6.2E+01	--	--	--	--	--	--	--	--	--	--	na	6.2E+01
2,4-Dimethylphenol	0	--	--	na	2.3E+03	--	--	na	2.3E+03	--	--	--	--	--	--	--	--	--	--	na	2.3E+03
Dimethyl Phthalate	0	--	--	na	2.9E+06	--	--	na	2.9E+06	--	--	--	--	--	--	--	--	--	--	na	2.9E+06
Di-n-Butyl Phthalate	0	--	--	na	1.2E+04	--	--	na	1.2E+04	--	--	--	--	--	--	--	--	--	--	na	1.2E+04
2,4-Dinitrophenol	0	--	--	na	1.4E+04	--	--	na	1.4E+04	--	--	--	--	--	--	--	--	--	--	na	1.4E+04
2-Methyl-4,6-Dinitrophenol	0	--	--	na	7.65E+02	--	--	na	7.7E+02	--	--	--	--	--	--	--	--	--	--	na	7.7E+02
2,4-Dinitrotoluene ^c uloxin (2,3,7,8- tetrachlorodibenzo-p-dioxin) (ppq)	0	--	--	na	9.1E+01	--	--	na	9.6E+01	--	--	--	--	--	--	--	--	--	--	na	9.6E+01
1,2-Diphenylhydrazine ^c	0	--	--	na	1.2E-06	--	--	na	na	--	--	--	--	--	--	--	--	--	--	na	na
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	2.2E-01	5.6E-02	na	2.4E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	2.4E+02
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	2.2E-01	5.6E-02	na	2.4E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	2.4E+02
Endosulfan Sulfate	0	--	--	na	2.4E+02	--	--	na	2.4E+02	--	--	--	--	--	--	--	--	--	--	na	2.4E+02

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Endrin	0	8.6E-02	3.6E-02	na	8.1E-01	8.6E-02	3.6E-02	na	8.1E-01	--	--	--	--	--	--	--	--	8.6E-02	3.6E-02	na	8.1E-01
Endrin Aldehyde	0	--	--	na	8.1E-01	--	--	na	8.1E-01	--	--	--	--	--	--	--	--	--	--	na	8.1E-01
Ethylbenzene	0	--	--	na	2.9E+04	--	--	na	2.9E+04	--	--	--	--	--	--	--	--	--	--	na	2.9E+04
Fluoranthene	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	--	--	--	--	--	--	--	--	na	3.7E+02
Fluorene	0	--	--	na	1.4E+04	--	--	na	1.4E+04	--	--	--	--	--	--	--	--	--	--	na	1.4E+04
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor ^C	0	5.2E-01	3.8E-03	na	2.1E-03	5.2E-01	3.8E-03	na	2.2E-03	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	2.2E-03
Heptachlor Epoxides ^C	0	5.2E-01	3.8E-03	na	1.1E-03	5.2E-01	3.8E-03	na	1.2E-03	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	1.2E-03
Hexachlorobenzene ^C	0	--	--	na	7.7E-03	--	--	na	8.1E-03	--	--	--	--	--	--	--	--	--	--	na	8.1E-03
Hexachlorobutadiene ^C	0	--	--	na	5.0E+02	--	--	na	5.3E+02	--	--	--	--	--	--	--	--	--	--	na	5.3E+02
Hexachlorocyclohexane	0	--	--	na	1.3E-01	--	--	na	1.4E-01	--	--	--	--	--	--	--	--	--	--	na	1.4E-01
Alpha-BHC ^C	0	--	--	na	4.6E-01	--	--	na	4.8E-01	--	--	--	--	--	--	--	--	--	--	na	4.8E-01
Beta-BHC ^C	0	--	--	na	6.3E-01	9.5E-01	--	na	6.6E-01	--	--	--	--	--	--	--	--	9.5E-01	--	na	6.6E-01
Hexachlorocyclohexane	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
Hexachlorocyclopentadiene	0	--	--	na	8.9E+01	--	--	na	9.3E+01	--	--	--	--	--	--	--	--	--	--	na	9.3E+01
Hexachloroethane ^C	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Hydrogen Sulfoxide	0	--	--	na	4.9E-01	--	--	na	5.1E-01	--	--	--	--	--	--	--	--	--	--	na	5.1E-01
Indeno (1,2,3-cd) pyrene ^C	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Iron	0	--	--	na	2.6E+04	--	--	na	2.7E+04	--	--	--	--	--	--	--	--	--	--	na	2.7E+04
Isophorone ^C	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Kepon	0	7.3E+01	8.3E+00	na	--	7.3E+01	8.3E+00	na	--	--	--	--	--	--	--	--	--	7.3E+01	8.3E+00	na	--
Lead	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Malathion	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Manganese	0	--	--	na	5.1E-02	1.4E+00	7.7E-01	na	5.1E-02	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	na	5.1E-02
Mercury	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	na	4.0E+03
Methyl Bromide	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Methoxychlor	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Mirex	0	--	--	na	2.1E+04	--	--	na	2.1E+04	--	--	--	--	--	--	--	--	--	--	na	2.1E+04
Monochlorobenzene	0	1.3E+02	1.5E+01	na	4.6E+03	1.3E+02	1.5E+01	na	4.6E+03	--	--	--	--	--	--	--	--	1.3E+02	1.5E+01	na	4.6E+03
Nickel	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrate (as N)	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	--	--	--	--	na	1.9E+03
Nitrobenzene	0	--	--	na	8.1E+01	--	--	na	8.5E+01	--	--	--	--	--	--	--	--	--	--	na	8.5E+01
N-Nitrosodimethylamine ^C	0	--	--	na	1.6E+02	--	--	na	1.7E+02	--	--	--	--	--	--	--	--	--	--	na	1.7E+02
N-Nitrosodiphenylamine ^C	0	--	--	na	1.4E+01	--	--	na	1.5E+01	--	--	--	--	--	--	--	--	--	--	na	1.5E+01
N-Nitrosodi-n-propylamine ^C	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
Parathion	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1016	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1221	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1232	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1242	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1248	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1254	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1260	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB Total ^C	0	--	--	na	1.7E-03	--	--	na	1.8E-03	--	--	--	--	--	--	--	--	--	--	na	1.8E-03

Parameter (ug/l unless noted) ^C	Background			Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	HH
Pentachlorophenol ^C	0	3.9E+00	3.0E+00	na	8.2E+01	3.9E+00	3.0E+00	na	8.6E+01	--	--	--	--	--	3.9E+00	3.0E+00	na	8.6E+01
Phenol	0	--	--	na	4.6E+06	--	--	na	4.6E+06	--	--	--	--	--	--	--	na	4.6E+06
Pyrene	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	--	--	--	--	--	na	1.1E+04
Radionuclides (pCi/l except Beta/Photon)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	na	--
Gross Alpha Activity	0	--	--	na	1.5E+01	--	--	na	1.5E+01	--	--	--	--	--	--	--	na	1.5E+01
Beta and Photon Activity (mrem/yr)	0	--	--	na	4.0E+00	--	--	na	4.0E+00	--	--	--	--	--	--	--	na	4.0E+00
Strontium-90	0	--	--	na	8.0E+00	--	--	na	8.0E+00	--	--	--	--	--	--	--	na	8.0E+00
Tritium	0	--	--	na	2.0E+04	--	--	na	2.0E+04	--	--	--	--	--	--	--	na	2.0E+04
Selenium	0	2.0E+01	5.0E+00	na	1.1E+04	2.0E+01	5.0E+00	na	1.1E+04	--	--	--	--	--	2.0E+01	5.0E+00	na	1.1E+04
Silver	0	1.8E+00	--	na	--	1.8E+00	--	na	--	--	--	--	--	--	1.8E+00	--	na	--
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	na	--
1,1,2,2-Tetrachloroethane ^C	0	--	--	na	1.1E+02	--	--	na	1.2E+02	--	--	--	--	--	--	--	na	1.2E+02
Tetrachloroethylene ^C	0	--	--	na	8.9E+01	--	--	na	9.3E+01	--	--	--	--	--	--	--	na	9.3E+01
Thallium	0	--	--	na	6.3E+00	--	--	na	6.3E+00	--	--	--	--	--	--	--	na	6.3E+00
Toluene	0	--	--	na	2.0E+05	--	--	na	2.0E+05	--	--	--	--	--	--	--	na	2.0E+05
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	na	--
Toxaphene ^C	0	7.3E-01	2.0E-04	na	7.5E-03	7.3E-01	2.0E-04	na	7.9E-03	--	--	--	--	--	7.3E-01	2.0E-04	na	7.9E-03
Tributyltin	0	4.6E-01	6.3E-02	na	--	4.6E-01	6.3E-02	na	--	--	--	--	--	--	4.6E-01	6.3E-02	na	--
1,2,4-Trichlorobenzene	0	--	--	na	9.4E+02	--	--	na	9.4E+02	--	--	--	--	--	--	--	na	9.4E+02
1,1,2-Trichloroethane ^C	0	--	--	na	4.2E+02	--	--	na	4.4E+02	--	--	--	--	--	--	--	na	4.4E+02
Trichloroethylene ^C	0	--	--	na	8.1E+02	--	--	na	8.5E+02	--	--	--	--	--	--	--	na	8.5E+02
2,4,6-Trichlorophenol ^C	0	--	--	na	6.5E+01	--	--	na	6.8E+01	--	--	--	--	--	--	--	na	6.8E+01
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	na	--
Vinyl Chloride ^C	0	--	--	na	6.1E+01	--	--	na	6.4E+01	--	--	--	--	--	--	--	na	6.4E+01
Zinc	0	8.5E+01	8.5E+01	na	6.9E+04	8.5E+01	8.5E+01	na	6.9E+04	--	--	--	--	--	8.5E+01	8.5E+01	na	6.9E+04

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 20 maximum for Industries and design flow for Municipals
- Metals measured as Dissolved, unless specified otherwise
- "C" indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information. Antidegradation WLAs are based upon a complete mix.
- Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
= (0.1(WQC - background conc.) + background conc.) for human health
- WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, Harmonic Mean for Carcinogens, and Annual Average for Dioxin. Mixing ratios may be substituted for stream flows where appropriate.

Metal	Target Value (SSTV)
Antimony	4.3E+03
Arsenic	9.0E+01
Barium	na
Cadmium	5.0E-01
Chromium III	3.2E+01
Chromium VI	6.4E+00
Copper	3.7E+00
Iron	na
Lead	5.0E+00
Manganese	na
Mercury	5.1E-02
Nickel	8.8E+00
Selenium	3.0E+00
Silver	7.1E-01
Zinc	3.4E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

Attachment H

**Table 2 from the Chowan River-Dismal Swamp Basins Water
Quality Management Plan (April 1982))**

TABLE 2 (CONTINUED)
RECOMMENDED ALTERNATIVES AND NPDES LIMITS
FOR SEWERAGE SERVICE AREAS THROUGH YEAR 2000

Service Area	Alternative(s)	Population	Limits	Design Flow (MGD)
<u>NOTTOWAY RIVER SUB-BASIN</u>				
<u>Burkeville-Crewe:</u> Provide joint system with land application.	The STP will be in James River Basin.	4,583	See James River 303(e) Plan.	0.74
<u>Victoria:</u> Provide secondary treatment and expand service area.	201 Facility Plan in progress.	2,643	30 mg/l BOD5 60 mg/l SS Big Hounds Ck.	0.203
<u>Kenbridge:</u> Provide secondary treatment with land application.	Expand and upgrade to overland flow.	2,364	28 mg/l BOD5 30 mg/l SS If discharged to Seay Creek.	0.3
<u>Blackstone:</u> Continue to convey waste to Fort Pickett for treatment.	Facility adequate through year 2000.	1,147	No limits required. 25 mg/l BOD5 30 mg/l SS	0.1
<u>McKenney:</u> New STP recently completed with discharge to Great Creek.	Expand and upgrade system to advanced secondary.	1,470	20 mg/l BOD5 60 mg/l SS	0.16
<u>Jarratt:</u> Provide advanced secondary effluent treatment.	Construct STP and collection system with discharge to Stony Creek.	626	30 mg/l BOD5 30 mg/l SS	0.076
<u>Stony Creek:</u> Provide secondary treatment of effluent.				

Attachment I

Threatened and Endangered Coordination Documents

Cohen,Tamira

From: Cohen,Tamira
Sent: Monday, July 13, 2009 3:44 PM
To: 'cindy_kane@fws.gov'
Cc: Daub,Eleanor
Subject: McKenney STP VPDES Permit Reissuance, VA0060402 - Response to Comments

Dear Ms. Kane,

Thank-you for the U.S. Fish and Wildlife Service's comments regarding the above noted permit reissuance via letter dated April 10, 2009 from Cindy Schulz. We have carefully reviewed the agency's comments and concerns and provide the comments below in response.

1. The Ammonia-N limit (5.1 mg/L) will be carried forward from the previous permit based on antibacksliding requirements and is more stringent than the limit that would be needed to meet chronic in-stream WQS criteria. Since the facility discharge is to an intermittent stream, the above limit reflects an end of pipe limit. In other words no mixing zone is allowed for this discharge.
2. DEQ acknowledges the research to support a lower ammonia water quality criterion to protect mussels. However, procedurally, many steps are needed to duly adopt a new criterion, this criterion may not be final for a few years and the exact numerical value of the proposed criteria may change during this process. Ammonia in particular is a complicated issue and was not addressed during the current Triennial Review because it was determined that it would require a more detailed investigation that would unduly prolong the Triennial Review progress. Instead, the agency has reconvened a Technical Advisory Committee to address this issue in more detail.
3. It should be noted that the Town STP uses the extended aeration activated sludge process. This treatment process consistently produces low-level ammonia as noted in the facility effluent monitoring data attached.
4. The discharge has been occurring for at least 30 years, the Town is not planning to upgrade the treatment system in the near future, there is no mixing zone and DEQ feels that the effluent is having minimal effect on the aquatic community. We are ready to address a lower ammonia criterion for this discharge when it is duly adopted.

Sincerely,

Tammy

Tamira Cohen

Environmental Engineer, Sr.
DEQ - Piedmont Regional Office
Tel: (804) 527-5012
Fax: (804) 527-5106

7/14/2009



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
6669 Short Lane
Gloucester, VA 23061



April 10, 2009

Ms. Tamira Cohen
Virginia Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060

Re: VPDES Permit Reissuance
VA0060402, Dinwiddie, Virginia,
Project # 2009-TA-0204

Dear Ms. Cohen:

This letter provides the U.S. Fish and Wildlife Service's (Service) response to your January 26, 2009, email request for comments on the proposed Virginia Pollutant Discharge Elimination System (VPDES) permit reissuance (VA0060402) for the Town of McKenney Sewage Treatment Plant. This letter constitutes the comments of the Service and is submitted in accordance with provisions of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and the 2007 Memorandum of Understanding (MOU) among the Virginia Department of Environmental Quality (Virginia DEQ), Virginia Department of Game and Inland Fisheries, Virginia Department of Conservation and Recreation, Division of Natural Heritage, and the Service regarding threatened and endangered species and habitat reviews for the VPDES permit issuance process.

The Federally listed endangered dwarf wedgemussel (*Alasmodonta heterodon*) is known to occur in the Nottoway River, Dinwiddie County, and may occur in the receiving stream, Great Creek. If the species occurs in the receiving stream, there may be adverse impacts to the species from ammonia levels in the discharge. At the point of effluent discharge, the receiving stream is intermittent and, thus, at times the stream is effluent-dominated. The facility discharge is 0.1 million gallons per day (mgd) and the Great Creek 7Q10 high flow is calculated to be 0.005 mgd. According to the information you provided, Great Creek stream flow is perennial downstream of the discharge at a distance closer to the confluence with the Nottoway River. The draft VPDES permit limits ammonia in the effluent to 5.1 mg/L. Freshwater mussels can be adversely affected by chronic ammonia levels as low as 0.3 mg/L (Wang *et al.* 2007).

Due to the stream size, flow, and habitat quality at the point of discharge, the Service recommends that the Virginia DEQ require a survey to determine the occurrence of suitable mussel habitat and mussels in the lowest 1,000 meters of Great Creek. The survey should begin at the confluence with the Nottoway River and continue 1,000 meters upstream in Great Creek.

Ms. Cohen

Page 2

The enclosed list contains individuals who are qualified to conduct surveys for the species listed above. The list does not include all individuals qualified or authorized to survey for these species. If you select someone not on the pre-approved surveyor list, please provide the proposed surveyor's name, qualifications, and proposed survey design to this office for review and approval prior to initiating surveys.

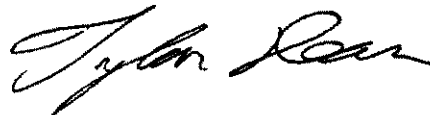
If Federally listed mussels occur in this creek, contact us for further coordination as the ammonia permit limit may need to be re-evaluated or an instream assessment of ammonia levels may be undertaken to evaluate protection of the mussels.

The State endangered Atlantic pigtoe (*Fusconaia masoni*) has also been documented in the Nottoway River and may occur in the receiving stream. We understand you are coordinating with the Virginia Department of Game and Inland Fisheries (projectreview@dgif.virginia.gov) concerning protection of this State listed species.

The Roanoke logperch (*Percina rex*), Federally listed endangered, also occurs in the Nottoway River in Dinwiddie County. We do not believe there will be effects to this species from this permitted discharge.

We appreciate the opportunity to comment and look forward to hearing from you. You can find species information and other pertinent information on project reviews within Virginia at our website http://www.fws.gov/northeast/virginiafield/Project_Reviews.html. If there are any questions, please contact Cindy Kane of this office at (804) 693-6694, extension 113 or by email at cindy_kane@fws.gov.

Sincerely,



acting for Cindy Schulz
Supervisor
Virginia Field Office

Enclosure

cc:
Virginia Dept. of Game and Inland Fisheries (ATTN: Mr. Brian Watson, Ms. Amy Ewing)
Virginia Dept of Conservation and Recreation, Div. of Natural Heritage (ATTN: Ms. Rene Hypes)

Literature Cited

Wang, N., C.G. Ingersoll, I.E. Greer, D.K Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T. Augspurger, C.M. Kane, R.J. Neves, and M.C. Barnhart. 2007. Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae). *Environmental Toxicology and Chemistry* 26(10):2048-2056.

ATLANTIC SLOPE FRESHWATER MUSSELS SURVEY CONTACTS IN VIRGINIA

This list contains individuals who we have already determined are qualified to conduct surveys for the species listed above. This list does not include all individuals qualified or authorized to survey for this species. If you select someone not on this pre-approved surveyor list, please provide the proposed surveyor's qualifications to this office 30 days prior to the start of the survey. Please send copies of all survey results to this office. If the survey determines that any rare species are present, please contact this office to allow us the opportunity to work with you to ensure that a project avoids or minimizes adverse effects to rare species and their habitats. Inclusion of names on this list does not constitute endorsement by the U.S. Fish and Wildlife Service or any other U.S. Government agency. Listed alphabetically. December 31, 2008

John Alderman
244 Red Gate Road
Pittsboro, NC 27312
(919) 542-5331
aldermjm@embarqmail.com

Braven Beaty
334 Whites Mill Road
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Richmond, VA 23219
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steve.roble@dcr.virginia.gov

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410-B Millstone Dr
Hillsborough, NC 27278
(919) 732-1300
tsavidge@thecatenagroup.com

Philip Stevenson
Creek Laboratory, LLC
P.O. Box 953
Fredericksburg, VA 22404
(877) 433-8962
phil@creeklab.com

Ms. Cohen

P:\EnvironmentalContaminants\Permits_Reviews_Ltrs_Sec7\VPDES\town of
McKenny\20090410_letter_Service to VDEQ_VPDES Reissue McKenney STP.doc

Bcc:

E. Winfried Coleman
McKenney STP
Route 1010
P.O. Box 309
McKenney, VA 23872

Instructions for cc to Mr. Brian Watson: Cindy Kane will send electronically as a pdf.

Cohen, Tamira

From: Cohen, Tamira
Sent: Tuesday, March 17, 2009 3:13 PM
To: Watson, Brian (DGIF)
Subject: RE: T&E Coordination for VPDES Permit Reissuance VA0060402 (Town of McKenney STP)
Attachments: McKenney VPDES Permit - WWTP Discharge March, 2009 008 approx 500 yds downstream.jpg; McKenney VPDES Permit - WWTP Discharge March 2007 effluent in receiving stream DEQ Inspection Photo; McKenney VPDES Permit - WWTP Discharge March, 2009 004 approx 1 mile downstream.jpg; McKenney VPDES Permit - WWTP Discharge March, 2009 005 discharge into creek.jpg; McKenney VPDES Permit - WWTP Discharge March, 2009 006 discharge into creek.jpg; McKenney VPDES Permit - WWTP Discharge March, 2009 007 about 500 yds downstream.jpg

Photos attached.

Tamira Cohen

Environmental Engineer, Sr.
DEQ - Piedmont Regional Office
Tel: (804) 527-5012
Fax: (804) 527-5106

From: Watson, Brian (DGIF)
Sent: Tuesday, March 17, 2009 3:10 PM
To: Cohen, Tamira
Cc: Daub, Elleanore
Subject: RE: T&E Coordination for VPDES Permit Reissuance VA0060402 (Town of McKenney STP)

Tamira,

Thank you for the info and I look forward to receiving the photographs. Once I have those, DGIF will provide our final comments.

Brian

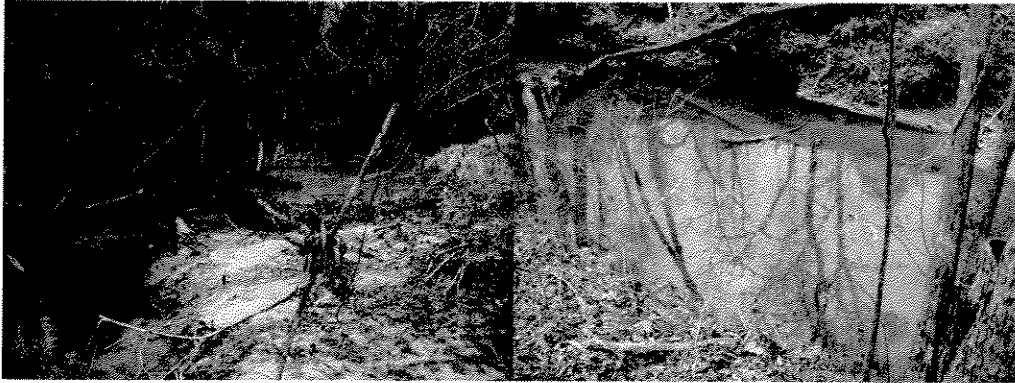
From: Cohen, Tamira (DEQ)
Sent: Tuesday, March 17, 2009 2:50 PM
To: Watson, Brian
Cc: Daub, Elleanore (DEQ)
Subject: RE: T&E Coordination for VPDES Permit Reissuance VA0060402 (Town of McKenney STP)

Brian,

Thank-you for your comments emailed February 27, 2009. We have carefully reviewed your comments and concerns and provide the following in response:

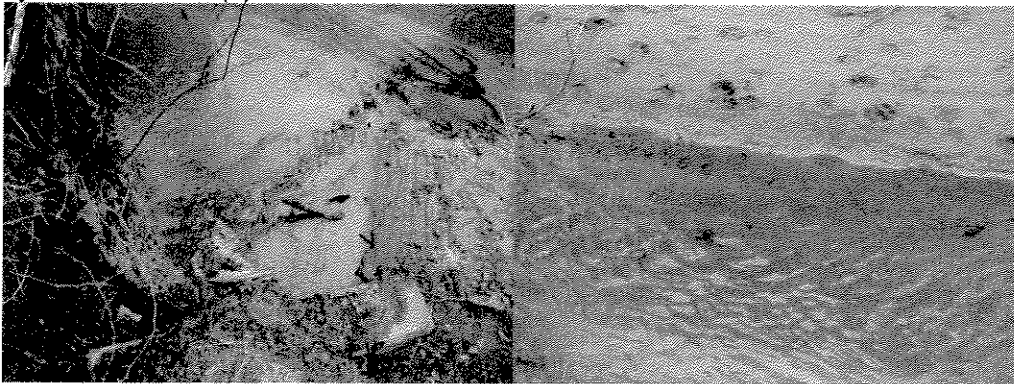
1. The Ammonia-N limit (5.1 mg/L) will be carried forward from the previous permit based on antibacksliding requirements and is more stringent than the limit that would be needed to meet chronic in-stream WQS criteria. Since the facility discharge is to an intermittent stream, the above limit reflects an end of pipe limit. In other words no mixing zone is allowed for this discharge.
2. DEQ acknowledges the research to support a lower ammonia water quality criterion to protect mussels. However, procedurally, many steps are needed to duly adopt a new criterion, this criterion may not be final for a few years and the exact numerical value of the proposed criteria may change during this process. Ammonia in particular is a complicated issue and was not addressed during the current Triennial Review because it was determined that it would require a more detailed investigation that would unduly prolong the Triennial Review progress. Instead, the agency has reconvened a Technical Advisory Committee to address this issue in more detail.
3. The lower portion of Great Creek is regarded as perennial. Photos of the receiving stream (kindly provided by the permittee) in

4/6/2009



McKenny VPDES Permit WWTP
Discharge March 2009 008 approx 500
yds downstream (2)

McKenny VPDES Permit - WWTP
Discharge March 2009 004 approxi 1 mile
downstream



McKenny VPDES Permit WWTP
Discharge March 2009 005 discharge
into creek

McKenny VPDES Permit - WWTP
Discharge March 2009 006 discharge into
creek



McKenny VPDES Permit WWTP
Discharge March 2009 007 about 500
yds downstream

addition to the one of the immediate vicinity of discharge from the 2007 DEQ inspection are attached (or will shortly follow). DEQ does not have a monitoring station in the receiving stream and so instream ammonia levels are not available. It should be noted that the Town STP uses the extended aeration activated sludge process. This treatment process consistently produces low-level ammonia as noted in the facility effluent monitoring data attached.

4. The discharge has been occurring for at least 30 years, the Town is not planning to upgrade the treatment system in the near future, there is no mixing zone and DEQ feels that the effluent is having minimal effect on the aquatic community. We are ready to address a lower ammonia criterion for this discharge when it is duly adopted.

Sincerely,

Tammy

Tamira Cohen

Environmental Engineer, Sr.
DEQ - Piedmont Regional Office
Tel: (804) 527-5012
Fax: (804) 527-5106

From: Cohen, Tamira
Sent: Friday, February 27, 2009 3:04 PM
To: Watson, Brian (DGIF)
Subject: RE: T&E Coordination for VPDES Permit Reissuance VA0060402 (Town of McKenney STP)

Brian,

I've asked for some additional information from our planning staff and will hopefully be able to provide this to you soon. As for your request for photographs, can I get some clarification as to the area you which photographed (the facility, the lower portions of Great Creek, vicinity of discharge)?

Thanks,

Tammy

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Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060
Tel: (804) 527-5012
Fax: (804) 527-5106

From: Watson, Brian (DGIF)
Sent: Friday, February 27, 2009 9:23 AM
To: Cohen, Tamira
Cc: Ewing, Amy (DGIF)
Subject: RE: T&E Coordination for VPDES Permit Reissuance VA0060402 (Town of McKenney STP)

Tamira,

Hopefully, these comments find you in time. Amy has just gotten back from maternity leave so we've been trying to keep up with the VPDES permits as best we can. The chlorine limits in the current permit look okay based on current WQS. We do have a concern about ammonia limits though. At the point of discharge, Great Creek appears to be intermittent based on flow data so no T&E species will be in the direct vicinity of the discharge but the lower portions of this stream, if perennial, may harbor rare species that are currently known to inhabit the Nottoway River, Great Creek's receiving stream. If this is the case, ammonia levels may be detrimental to listed species in this area since at least a portion of Great Creek is effluent dominated and ammonia levels would need to dissipate 50x to reach levels of 0.1 mg/l that have been shown to be detrimental to freshwater mussels. According to the topo map, the lower portions of Great Creek are perennial. Can DEQ confirm if the lower portions of Great Creek is intermittent or perennial and if perennial, has any ammonia testing been conducted in stream and can the applicant provide photographs of the site to determine if suitable habitat exists for rare species?

4/6/2009

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Brian

Brian T. Watson
Wildlife Diversity Biologist/Malacologist
VA Dept. of Game & Inland Fisheries
1132 Thomas Jefferson Road
Forest, VA 24551
(434) 525-7522, x 114
Fax: (434) 525-7720
Cell: (434) 941-5990
Brian.Watson@dgif.virginia.gov

From: Cohen, Tamira (DEQ)
Sent: Monday, January 26, 2009 2:56 PM
To: Watson, Brian; cindy_kane@fws.gov
Cc: Tylan_Dean@fws.gov; Daub, Eleanore (DEQ)
Subject: T&E Coordination for VPDES Permit Reissuance VA0060402 (Town of McKenney STP)

<<T&E Coordination Form_Revised_McKenney STP VA0060402.doc>> <<VA0060402_effluent limits 2004.pdf>>
<<USFWS_Dinwiddie_species occurrences.pdf>> <<vafwis_report 12222008_logperch map.pdf>> <<vafwis_report
12222008_pigtoe map.pdf>>

Mr. Watson and Ms. Kane,

A T&E Coordination form for the above noted facility was sent to DGIF and DCR on 12/23/08. A revised form is included above

4/6/2009

which notes FE and SE species found in the general search area. Comments and response to comments have already been exchanged between DEQ and DCR and are attached above.

The existing effluent limitation page is also attached given the draft permit limitation has not yet been developed. The application is available for review upon request.

Please review and provide any comments within the next 30 days and do not hesitate to contact me if you need further information.

Sincerely,

Tamira Cohen

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Department of Environmental Quality

Piedmont Regional Office

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Tel: (804) 527-5012

Fax: (804) 527-5106

Cohen, Tamira

From: Watson, Brian (DGIF)
Sent: Friday, February 27, 2009 3:24 PM
To: Cohen, Tamira
Subject: RE: T&E Coordination for VPDES Permit Reissuance VA0060402 (Town of McKenney STP)

Tamira,

If we could get some photos of Great Creek in vicinity to the discharge and the lower portions of Great Creek, that would be helpful in determining suitability for either of the rare species known from the Nottoway River. Thanks.

Brian

From: Cohen, Tamira (DEQ)
Sent: Friday, February 27, 2009 3:04 PM
To: Watson, Brian
Subject: RE: T&E Coordination for VPDES Permit Reissuance VA0060402 (Town of McKenney STP)

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Fax: (804) 527-5106

4/6/2009

Cohen, Tamira
From: Cohen, Tamira
Sent: Monday, January 26, 2009 2:52 PM
To: Watson, Brian (DGIF); 'cindy_kane@fws.gov'
Cc: 'Tylan_Dean@fws.gov'; Daub, Eleanore
Subject: T&E Coordination for VPDES Permit Reissuance VA0060402 (Town of McKenney STP)

Attachments: T&E Coordination Form_Revised_McKenney STP VA0060402.doc;
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T&E VA0060402_effluent limits 2004



USFWS_Dinwiddie_species occurrences.pdf;
vafwis_report 12222008_logperch map.pdf; vafwis_report 12222008_pigtoe map.pdf



RE: VA
0402, McKenney

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Fax: (804) 527-5106



VPDES PERMITS

Threatened and Endangered Species Coordination

(Revised Form)

To:

- ☒ DGIF, Environmental Review Coordinator
☒ DCR
☒ USFWS, T/E Review Coordinator

From: Tamira Cohen, PRO

Original Date Sent: December 22, 2008

Revision Sent: January 26, 2009

Permit Number: VA0060402

Facility Name: McKenney STP

Contact: E. Winfried Coleman

Phone: 804-478-4621

Address: Route 1010

P.O. Box 309

McKenney, VA 23872

Location:

USGS Quadrangle: McKenney, VA

Latitude/Longitude: N36-58-51.5; W77-44-25.7

Receiving Stream: Great Creek

Receiving Stream Flow Statistics used for Permit:

1Q30: 0.000 MGD High Flow 1Q10: 0.003 MGD
1Q10: 0.000 MGD High Flow 7Q10: 0.005 MGD
7Q10: 0.000 MGD High Flow 30Q10: 0.021 MGD
30Q10: 0.000 MGD HM: 0.005 MGD
30 Q5: 0.000 MGD

Effluent Characteristics and Max Daily Flow:

Municipal wastewater

Design flow: 0.1 MGD

Average Daily Flow Rate: 0.052 MGD

Maximum Daily Flow Rate: 0.186 MGD

Species Search Results (or attach database report and map):

See Attached and note the following:

FE/SE species (Roanoke Logperch) and FS/ST species (Atlantic Pigtoe) identified in the Nottoway River. Please note that the facility discharge to the receiving stream (Great Creek) is approximately 1.5 miles upstream of the confluence with the Nottoway River.

Note: One ST bird species (Shrike, migrant loggerhead) identified in general search radius but this bird appears to be primarily terrestrial (habitat and prey).

Attach draft permit effluent limits page if available or attach existing effluent limits page (make sure it is clear in your email which one it is – draft current or existing).

DGIF email: projectreview@dgif.virginia.gov

USFWS email: cindy_kane@fws.gov

DCR: If Natural Heritage Data Explorer (NHDE) has the needed information DCR does not need this form. If you have additional information you wish to add, you may do so in the comments field on the NHDE form. DCR will contact you directly if they need more information.

Cohen,Tamira

From: Cohen,Tamira
Sent: Monday, January 26, 2009 12:33 PM
To: Hypes, Rene (DCR)
Subject: RE: VA 0060402, McKenney STP

Thank-you for your quick response. A T&E Coordination form was sent to DGIF at the same time it was sent to DCR. A T&E Coordination form will also be sent to USFWS.

Sincerely,

Tamira Cohen
Environmental Engineer, Sr.
Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060
Tel: (804) 527-5012
Fax: (804) 527-5106

-----Original Message-----

From: Hypes, Rene (DCR)
Sent: Monday, January 26, 2009 12:11 PM
To: Cohen,Tamira
Subject: RE: VA 0060402, McKenney STP

Tamira,

Chris Hobson, DCR zoologist, reviewed the additional information you provided for the permit reissuance and feels that our concerns are addressed. Please note however that due to the listed status of the Roanoke logperch and Atlantic pigtoe, we still recommend coordination with USFWS and VDGIF to ensure compliance with protected species legislation.

Thanks for the additional information.

Rene'

S. Rene' Hypes
Project Review Coordinator
DCR-DNH
217 Governor Street
Richmond, Virginia 23219
804-371-2708 (phone)
804-371-2674 (fax)
Rene.Hypes@dcr.virginia.gov

>>> "Cohen,Tamira" <tcohen@deq.virginia.gov> 01/26/09 9:25 AM >>>
Please note correction to Item 5) of response to comments sent previously. Sentence should read: The facility currently uses chlorination as a method of disinfection but is required to dechlorinate prior to discharge.

Tamira Cohen

Environmental Engineer, Sr.

Department of Environmental Quality

Piedmont Regional Office

4949-A Cox Road

Glen Allen, VA 23060

Tel: (804) 527-5012

Fax: (804) 527-5106

From: Cohen, Tamira

Sent: Friday, January 23, 2009 3:23 PM

To: 'nhreview nhreview'; Hypes, Rene (DCR)

Cc: ProjectReview.Richmond_PO.DGIF@dgif.virginia.gov; Tylan_Dean@fws.gov

Subject: RE: VA 0060402, McKenney STP

Thank-you for the DCR-DNH comments for the above referenced permit reissuance. The response to comments presented in your report (received January 21, 2009) are listed below.

- 1) The discharge is approximately 1.5 miles upstream of the confluence with the Nottoway River where two of the targeted species have been measured.
- 2) The stream flows used for permit limit development are 7Q10=0 and 1Q10=0. Consequently, the wastewater discharge from the facility is expected to meet water quality standards at the point of discharge prior to entering receiving waters (i.e. no mixing zone).
- 3) The wastewater effluent has been analyzed for all state regulated chemicals/parameters. Currently, DEQ is evaluating this data against VA Water Quality Standards. Any parameters that show reasonable potential of violating WQS will be addressed in the permit and fact sheet (i.e. permit limits).
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- 6) A T&E coordination package will be forwarded to USFWS.

Please advise if the above does not satisfy concerns outlined in your report and if you wish to review the draft permit once it is complete.

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Department of Environmental Quality

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Fax: (804) 527-5106

-----Original Message-----

From: nhreview nhreview

[mailto:nhreview.po-richmond.dom-richmond@dcv.virginia.gov]

Sent: Wednesday, January 21, 2009 6:34 PM

To: Cohen, Tamira

Cc: ProjectReview.Richmond_PO.DGIF@dgif.virginia.gov; Tylan_Dean@fws.gov

Subject: VA 0060402, McKenney STP

Ms. Cohen,

Please find attached the DCR-DNH comments for the above referenced project. The comments are in word format and can be printed for your records. Also species rank information is available at http://www.dcr.virginia.gov/natural_heritage/help.shtml for your reference.

Please send a confirmation e-mail upon receipt of our comments. Let us know if you have any questions.

Thank you for your request.

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1/27/2009

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1/27/2009

L. Preston Bryant, Jr.
Secretary of Natural Resources



Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

217 Governor Street
Richmond, Virginia 23219-2010
(804) 786-7951 FAX (804) 371-2674

January 21, 2009

Tamira Cohen
DEQ-Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060

Re: VA0060402, McKenney STP

Dear Ms. Cohen:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the Nottoway River-Sturgeon Creek Stream Conservation Unit is located downstream of the project area. Stream Conservation Units identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are also given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain. This SCU has been given a biodiversity ranking of B1, which represents a site of outstanding significance. The natural heritage resources associated with this site are:

<u>Scientific Name</u>	<u>Common Name</u>	<u>Global Rank</u>	<u>State Rank</u>	<u>Federal Status</u>	<u>State Status</u>	<u>Federal Species of Concern</u>
<i>Elliptio lanceolata</i>	Yellow lance	G2G3	S2S3		SC	SOC
<i>Fusconaia masoni</i>	Atlantic pigtoe	G2	S2		LT	SOC
<i>Lampsilis cariosa</i>	Yellow lampmussel	G3G4	S2		SC	
<i>Lampsilis radiata</i>	Eastern lampmussel	G5	S2S3		SC	
<i>Percina rex</i>	Roanoke logperch	G1G2	S1S2	LE	LE	

The Yellow lance occurs in mid-sized rivers and second and third order streams. To survive, it needs a silt-free, stable streambed and well-oxygenated water that is free of pollutants. In Virginia, the Yellow lance is currently known from populations in the Chowan, James, York, Rappahannock, and Potomac River drainages. Please note that this species is currently classified as a species of concern by the United States Fish and Wildlife Service (USFWS) and a special concern species by the VDGIF; however, these designations have no official legal status.

The Atlantic pigtoe is a medium-sized freshwater mussel reaching a length of 60 mm. In Virginia, this species is known from the James, Chowan and Roanoke river basins (TNC, 1996). The Atlantic pigtoe prefers clear, swift waters with gravel or sand and gravel substrates. Many populations from the main stem of larger rivers have disappeared. The species is limited to the headwater areas of drainages in which it occurs. Threats to this rare mussel species include pollution, impoundments, clearcutting, and dredging (Gerberich, 1991). Please note that the Atlantic pigtoe is currently listed as threatened by the VDGIF. It is also tracked as a species of concern by the USFWS; however, this designation has no official legal status.

The yellow lampmussel averages about 70 mm in length but can reach a length of 130 mm (Johnson, 1970). The yellow lampmussel is found in larger streams and rivers where good currents exist over a sand and gravel substrate and in small creeks and ponds. This species is known to occur in the Potomac, York, and Chowan river basins (TNC, 1996). Please note that this species is considered one of concern by VDGIF; however, this designation has no official legal status.

The Eastern lampmussel has been documented in the York and Chowan River systems in areas with substrates composed of silt, sand, cobble, gravel and exposed bedrock (TNC, 1996). Please note that the Eastern lampmussel is currently classified as a special concern species by VDGIF; however, this designation has no official legal status.

Considered good indicators of the health of aquatic ecosystems, freshwater mussels are dependent on good water quality, good physical habitat conditions, and an environment that will support populations of host fish species (Williams et al., 1993). Because mussels are sedentary organisms, they are sensitive to water quality degradation related to increased sedimentation and pollution. They are also sensitive to habitat destruction through dam construction, channelization, and dredging, and the invasion of exotic mollusk species.

The Roanoke logperch is endemic to the Roanoke and Chowan river drainages in Virginia (Burkhead and Jenkins, 1991). This species inhabits medium and large, warm and usually clear rivers with sandy to boulder spotted bottoms (TNC et. al., 1991). The Roanoke logperch is threatened by channelization, siltation, impoundment, pollution, and de-watering activities (Burkhead & Jenkins, 1991). Please note that the Roanoke logperch is currently classified as endangered by USFWS and VDGIF.

In addition, the Nottoway River has been designated by VDGIF as "Threatened and Endangered Species Waters" for the Atlantic Pigtoe, the Roanoke logperch and the Dwarf wedgemussel (*Alasmidonta heterodon*, G1G2/S1/LE/LE). Due to the legal status of these natural heritage resources associated with this site, DCR recommends coordination with USFWS and VDGIF to ensure compliance with protected species legislation. DCR also recommends use of ultraviolet light instead of chlorine for disinfection of wastewater due its ability to effectively disinfect most infectious agents within wastewater and no production of toxic by-products (Snowden-Swan et al., 1998).

Our files also do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

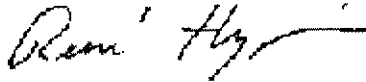
Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Conservation and Recreation (DCR), DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters, that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/>, or contact Shirl Dressler at (804) 367-6913.

Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on this project.

Sincerely,

A handwritten signature in black ink, appearing to read "S. René Hypes", with a stylized flourish at the end.

S. René Hypes
Project Review Coordinator

CC: Ernie Aschenbach, VDGIF
Tylan Dean, USFWS

Literature Cited

- Burkhead, N.M. and R.E. Jenkins. 1991. Roanoke logperch. In Virginia's Endangered Species: Proceedings of a Symposium. K. Terwilliger ed. The McDonald and Woodward Publishing Company, Blacksburg, Virginia. p. 395-397.
- Gerberich, Andy. 1991. Atlantic pigtoe. In Virginia's Endangered Species: Proceedings of a Symposium. K. Terwilliger ed. The McDonald and Woodward Publishing Company, Blacksburg, Virginia.
- Johnson, R.I. 1970. The systematics and zoogeography of the Unionidae (Mollusca: Bivalva) of the southern Atlantic slope region. Bulletin Museum of Comparative Zoology vol 140(6): 362-365.
- Snowden-Swan, L., J. Piatt and A. Lesperance. 1998. Disinfection Technologies for Portable Water and Wastewater Treatment: Alternatives to Chlorine Gas. 31-32.
- The Nature Conservancy and The Network of Natural Heritage Programs and Conservation Data Centers. 1999. Natural Heritage Conservation Databases. Accessed through the Biosource web site project. The Nature Conservancy, Arlington, VA. (7/14/99).
- The Nature Conservancy. 1996. Biological and Conservation Data System. Arlington, Virginia, USA.
- Williams, J.D., M.L. Warren, Jr., K.S. Cummings, J.L. Harris, and R.J. Neves. 1993. Conservation status of freshwater mussels of the United States and Canada. Fisheries 18: 6-9.

Cohen, Tamira

From: Cohen, Tamira
Sent: Tuesday, December 23, 2008 9:58 AM
To: 'projectreview@dgif.virginia.gov'
Cc: Daub, Elleanore
Subject: VA0060402, McKenney STP VPDES Permit Reissuance; T&E Coordination

Attachments: DGIF Coordination Form_McKenney STP VA0060402.doc; vafwis_report 12222008.pdf; vafwis_report 12222008_pigtoe map.pdf; VAFWIS_12222008_pigtoe_2.pdf; vafwis_report 12222008_logperch map.pdf; VA0060402_effluent limits 2004.pdf



DGIF Coordination
Form_McKenne...



vafwis_report
12222008.pdf (14...



vafwis_report
12222008_pigtoe ...



VAFWIS_12222008
_pigtoe_2.pdf (...



vafwis_report
12222008_logperc...



VA0060402_effluen
t limits 2004...

Attached please find the coordination form and related attachments for the above noted facility. The existing effluent limitation page is included given the draft permit limitation has not yet been developed. The application is available for review upon request.

Please do not hesitate to contact me if you require additional information.

Sincerely,

Tamira Cohen

Environmental Engineer, Sr.
Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060
Tel: (804) 527-5012
Fax: (804) 527-5106

A. Limitations and Monitoring Requirements

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall number 001. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITS					MONITORING REQUIREMENTS		
	MONTHLY AVERAGE		WEEKLY AVERAGE		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD) ^a	NL		NA		NA	NL	Continuous	Tot Ind Rec
BOD ₅	25 mg/l	9.5 kg/d	38 mg/l	14 kg/d	NA	NA	1/Week	4 HC
Total Suspended Solids (TSS)	30 mg/l	11 kg/d	45 mg/l	17 kg/d	NA	NA	1/Month	4 HC
Ammonia-N	5.1 mg/l	NA	5.1 mg/l	NA	NA	NA	1/Month	Grab
Total Residual Chlorine (TRC) ^b	0.008 mg/l	NA	0.008 mg/l	NA	NA	NA	3/Day at 4Hr Intervals	Grab
pH (standard units)	NA		NA		6.0	9.0	1/Day	Grab
Dissolved Oxygen (DO)	NA		NA		6.6 mg/l	NA	1/Day	Grab

NL = No Limit, monitoring only

NA = Not Applicable

- a. The design flow of this treatment facility is 0.1 MGD.
- b. See Part I.B. for additional limitations and requirements.
2. There shall be no discharge of floating solids or visible foam in other than trace amounts.
3. At least 85% removal for BOD and TSS must be attained for this effluent.



VPDES PERMITS

Threatened and Endangered Species Coordination

To: <input checked="" type="checkbox"/> DGIF, Environmental Review Coordinator <input checked="" type="checkbox"/> DCR <input type="checkbox"/> USFWS, T/E Review Coordinator From: Tamira Cohen, PRO	Date Sent: December 22, 2008 Permit Number: VA0060402
Facility Name: McKenney STP Contact: E. Winfried Coleman Phone: 804-478-4621 Address: Route 1010 P.O. Box 309 McKenney, VA 23872	Location: USGS Quadrangle: McKenney, VA Latitude/Longitude: N36-58-51.5; W77-44-25.7 Receiving Stream: Great Creek Receiving Stream Flow Statistics used for Permit: 1Q30: 0.000 MGD High Flow 1Q10: 0.003 MGD 1Q10: 0.000 MGD High Flow 7Q10: 0.005 MGD 7Q10: 0.000 MGD High Flow 30Q10: 0.021 MGD 30Q10: 0.000 MGD HM: 0.005 MGD 30 Q5: 0.000 MGD
Effluent Characteristics and Max Daily Flow: Municipal wastewater Design flow: 0.1 MGD Average Daily Flow Rate: 0.052 MGD Maximum Daily Flow Rate: 0.186 MGD	Species Search Results (or attach database report and map): See Attached and note the following: No FE/SE/FT/ST species found in receiving waters (DGIF) and no LE/LT species found in search area (DCR). Note: One ST bird species (Shrike, migrant loggerhead) identified in general search radius but this bird appears to be primarily terrestrial (habitat and prey).

Attach draft permit effluent limits page if available or attach existing effluent limits page (make sure it is clear in your email which one it is – draft current or existing).

DGIF email: projectreview@dgif.virginia.gov

USFWS email: cindy_kane@fws.gov

DCR: If Natural Heritage Data Explorer (NHDE) has the needed information DCR does not need this form. If you have additional information you wish to add, you may do so in the comments field on the NHDE form.

DCR will contact you directly if they need more information.

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VaFWIS Search Report Compiled on 12/22/2008, 8:50:50 AM

Known or likely to occur within a **2 mile radius of 36,58,51 77,44,25**
in **025 Brunswick County, 053 Dinwiddie County, VA**

413 Known or Likely Species ordered by Status Concern for Conservation

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed
010214	FESE	I	<u>Logperch, Roanoke</u>	Percina rex	<u>Yes</u>
040228	FESE	I	<u>Woodpecker, red-cockaded</u>	Picoides borealis	
040129	ST	I	<u>Sandpiper, upland</u>	Bartramia longicauda	
040293	ST	I	<u>Shrike, loggerhead</u>	Lanius ludovicianus	
040385	ST	I	<u>Sparrow, Bachman's</u>	Aimophila aestivalis	
040093	FSST	II	<u>Eagle, bald</u>	Haliaeetus leucocephalus	
060173	FSST	II	<u>Pigtoe, Atlantic</u>	Fusconaia masoni	<u>Yes</u>
040292	ST		<u>Shrike, migrant loggerhead</u>	Lanius ludovicianus migrans	
070105	FS	III	<u>Crayfish, Chowanoke</u>	Orconectes virginienensis	
010077	SS	I	<u>Shiner, bridge</u>	Notropis bifrenatus	
010174	SS	II	<u>Bass, Roanoke</u>	Ambloplites cavifrons	
010032	SS	II	<u>Sturgeon, Atlantic</u>	Acipenser oxyrinchus	
040266	SS	II	<u>Wren, winter</u>	Troglodytes troglodytes	
030063	CC	III	<u>Turtle, spotted</u>	Clemmys guttata	
040094	SS	III	<u>Harrier, northern</u>	Circus cyaneus	
040036	SS	III	<u>Night-heron, yellow-crowned</u>	Nyctanassa violacea violacea	
040204	SS	III	<u>Owl, barn</u>	Tyto alba pratincola	
060071	SS	III	<u>Lampmussel, yellow</u>	Lampsilis cariosa	
040264	SS	IV	<u>Creeper, brown</u>	Certhia americana	
040364	SS		<u>Dickcissel</u>	Spiza americana	
040032	SS		<u>Egret, great</u>	Ardea alba egretta	
040366	SS		<u>Finch, purple</u>	Carpodacus purpureus	
040285	SS		<u>Kinglet, golden-crowned</u>	Regulus satrapa	
040112	SS		<u>Moorhen, common</u>	Gallinula chloropus cachinnans	
040262	SS		<u>Nuthatch, red-breasted</u>	Sitta canadensis	
040189	SS		<u>Tern, Caspian</u>	Sterna caspia	
040278	SS		<u>Thrush, hermit</u>	Catharus guttatus	
040314	SS		<u>Warbler, magnolia</u>	Dendroica magnolia	
050045	SS		<u>Otter, northern river</u>	Lontra canadensis lataxina	
060076	SS		<u>Lampmussel, eastern</u>	Lampsilis radiata radiata	<u>Yes</u>
040225		I	<u>Sapsucker, yellow-bellied</u>	Sphyrapicus varius	
040319		I	<u>Warbler, black-throated green</u>	Dendroica virens	
060084		I	<u>Pigtoe, Virginia</u>	Lexingtonia subplana	
040052		II	<u>Duck, American black</u>	Anas rubripes	
040105		II	<u>Rail, king</u>	Rallus elegans	
040320		II	<u>Warbler, cerulean</u>	Dendroica cerulea	
020022		III	<u>Waterdog, dwarf</u>	Necturus punctatus	

030068		III	<u>Turtle, eastern box</u>	Terrapene carolina carolina	
040037		III	<u>Bittern, least</u>	Ixobrychus exilis exilis	Yes
060145		III	<u>Mussel, notched rainbow</u>	Villosa constricta	
010038		IV	<u>Alewife</u>	Alosa pseudoharengus	
010131		IV	<u>Eel, American</u>	Anguilla rostrata	Yes
010040		IV	<u>Shad, American</u>	Alosa sapidissima	
010375		IV	<u>Shiner, ironcolor</u>	Notropis chalybaeus	
010179		IV	<u>Sunfish, banded</u>	Enneacanthus obesus	
010173		IV	<u>Sunfish, mud</u>	Acantharchus pomotis	
020069		IV	<u>Salamander, eastern mud</u>	Pseudotriton montanus montanus	
020058		IV	<u>Siren, greater</u>	Siren lacertina	
020061		IV	<u>Spadefoot, eastern</u>	Scaphiopus holbrookii	
030009		IV	<u>Lizard, eastern slender glass</u>	Ophisaurus attenuatus longicaudus	
030025		IV	<u>Mudsnake, eastern</u>	Farancia abacura abacura	
030045		IV	<u>Ribbonsnake, common</u>	Thamnophis sauritus sauritus	
030017		IV	<u>Scarletsnake, northern</u>	Cemophora coccinea copei	
030058		IV	<u>Slider, yellow-bellied</u>	Trachemys scripta scripta	
030024		IV	<u>Snake, eastern hog-nosed</u>	Heterodon platirhinos	
030033		IV	<u>Snake, queen</u>	Regina septemvittata	
040349		IV	<u>Blackbird, rusty</u>	Euphagus carolinus	
040100		IV	<u>Bobwhite, northern</u>	Colinus virginianus	Yes
040272		IV	<u>Catbird, gray</u>	Dumetella carolinensis	Yes
040337		IV	<u>Chat, yellow-breasted</u>	Icteria virens virens	Yes
040214		IV	<u>Chuck-will's-widow</u>	Caprimulgus carolinensis	
040202		IV	<u>Cuckoo, yellow-billed</u>	Coccyzus americanus	
040142		IV	<u>Dowitcher, short-billed</u>	Limnodromus griseus	
040028		IV	<u>Heron, green</u>	Butorides virescens	Yes
040229		IV	<u>Kingbird, eastern</u>	Tyrannus tyrannus	Yes
040344		IV	<u>Meadowlark, eastern</u>	Sturnella magna	Yes
040263		IV	<u>Nuthatch, brown-headed</u>	Sitta pusilla	
040330		IV	<u>Ovenbird</u>	Seiurus aurocapilla	Yes
040312		IV	<u>Parula, northern</u>	Parula americana	
040243		IV	<u>Pewee, eastern wood</u>	Contopus virens	Yes
040109		IV	<u>Rail, yellow</u>	Coturnicops noveboracensis	
040065		IV	<u>Scaup, greater</u>	Aythya marila	
040391		IV	<u>Sparrow, field</u>	Spizella pusilla	Yes
040378		IV	<u>Sparrow, grasshopper</u>	Ammodramus savannarum pratensis	Yes
040248		IV	<u>Swallow, northern rough-winged</u>	Stelgidopteryx serripennis	
040217		IV	<u>Swift, chimney</u>	Chaetura pelagica	Yes

040355	IV	<u>Tanager, scarlet</u>	Piranga olivacea	Yes
040273	IV	<u>Thrasher, brown</u>	Toxostoma rufum	Yes
040277	IV	<u>Thrush, wood</u>	Hylocichla mustelina	Yes
040375	IV	<u>Towhee, eastern</u>	Pipilo erythrophthalmus	Yes
040297	IV	<u>Vireo, yellow-throated</u>	Vireo flavifrons	Yes
040302	IV	<u>Warbler, black-and-white</u>	Mniotilta varia	Yes
040307	IV	<u>Warbler, blue-winged</u>	Vermivora pinus	
040340	IV	<u>Warbler, Canada</u>	Wilsonia canadensis	
040333	IV	<u>Warbler, Kentucky</u>	Oporornis formosus	Yes
040328	IV	<u>Warbler, prairie</u>	Dendroica discolor	Yes
040303	IV	<u>Warbler, prothonotary</u>	Protonotaria citrea	
040305	IV	<u>Warbler, worm-eating</u>	Helminthos vermivorus	
040313	IV	<u>Warbler, yellow</u>	Dendroica petechia	Yes
040332	IV	<u>Waterthrush, Louisiana</u>	Seiurus motacilla	
040215	IV	<u>Whip-poor-will</u>	Caprimulgus vociferus	Yes
040140	IV	<u>Woodcock, American</u>	Scolopax minor	
050075	IV	<u>Mouse, cotton</u>	Peromyscus gossypinus gossypinus	
060137	IV	<u>Mussel, creeper</u>	Strophitus undulatus	Yes
060005	IV	<u>Mussel, triangle floater</u>	Alasmidonta undulata	Yes
100275	IV	<u>Butterfly, Georgia satyr</u>	Neonympha areolata	
010188		<u>Bass, largemouth</u>	Micropterus salmoides	
010175		<u>Bass, rock</u>	Ambloplites rupestris	
010186		<u>Bass, smallmouth</u>	Micropterus dolomieu	
010168		<u>Bass, striped</u>	Morone saxatilis	
010167		<u>Bass, white</u>	Morone chrysops	
010183		<u>Bluegill</u>	Lepomis macrochirus	Yes
010034		<u>Bowfin</u>	Amia calva	
010123		<u>Bullhead, brown</u>	Ameiurus nebulosus	
010124		<u>Bullhead, flat</u>	Ameiurus platycephalus	Yes
010122		<u>Bullhead, yellow</u>	Ameiurus natalis	
010062		<u>Carp, common</u>	Cyprinus carpio	
010125		<u>Catfish, channel</u>	Ictalurus punctatus	
010120		<u>Catfish, white</u>	Ameiurus catus	
010066		<u>Chub, bluehead</u>	Nocomis leptcephalus	
010103		<u>Chub, creek</u>	Semotilus atromaculatus	
010106		<u>Chubsucker, creek</u>	Erimyzon oblongus	
010190		<u>Crappie, black</u>	Pomoxis nigromaculatus	
010189		<u>Crappie, white</u>	Pomoxis annularis	
010101		<u>Dace, blacknose</u>	Rhinichthys atratulus	
010060		<u>Dace, mountain redbelly</u>	Phoxinus oreas	

010193		<u>Darter, fantail</u>	Etheostoma flabellare	
010204		<u>Darter, glassy</u>	Etheostoma vitreum	
010198		<u>Darter, johnny</u>	Etheostoma nigrum	
010213		<u>Darter, shield</u>	Percina peltata	
010194		<u>Darter, swamp</u>	Etheostoma fusiforme	
010033		<u>Gar, longnose</u>	Lepisosteus osseus	
010059		<u>Goldfish</u>	Carassius auratus	
010045		<u>Herring, blueback</u>	Alosa aestivalis	
010112		<u>Jumprock, black</u>	Moxostoma cervinum	
010129		<u>Madtom, margined</u>	Noturus insignis	
010128		<u>Madtom, tadpole</u>	Noturus gyrinus	
010063		<u>Minnow, cutlips</u>	Exoglossum maxillingua	
010148		<u>Mosquitofish, eastern</u>	Gambusia holbrooki	
010054		<u>Mudminnow, eastern</u>	Umbra pygmaea	
010163		<u>Perch, pirate</u>	Aphredoderus sayanus sayanus	
010166		<u>Perch, white</u>	Morone americana	
010206		<u>Perch, yellow</u>	Perca flavescens	
010056		<u>Pickrel, chain</u>	Esox niger	Yes
010055		<u>Pickrel, redfin</u>	Esox americanus americanus	
010182		<u>Pumpkinseed</u>	Lepomis gibbosus	
010374		<u>Quillback</u>	Carpiodes cyprinus	
010114		<u>Redhorse, golden</u>	Moxostoma erythrurum	
010116		<u>Redhorse, shorthead</u>	Moxostoma macrolepidotum	
010387		<u>Redhorse, silver</u>	Moxostoma anisurum	
010113		<u>Redhorse, v-lip</u>	Moxostoma pappillosum	
010041		<u>Shad, gizzard</u>	Dorosoma cepedianum	
010042		<u>Shad, threadfin</u>	Dorosoma petenense	
010072		<u>Shiner, comely</u>	Notropis amoenus	
010078		<u>Shiner, crescent</u>	Luxilus cerasinus	
010068		<u>Shiner, golden</u>	Notemigonus crysoleucas	
010071		<u>Shiner, highfin</u>	Notropis altipinnis	
010094		<u>Shiner, mimic</u>	Notropis volucellus	
010074		<u>Shiner, rosefin</u>	Lythrurus ardens	
010073		<u>Shiner, satinfin</u>	Cyprinella analostana	
010082		<u>Shiner, spottail</u>	Notropis hudsonius	
010086		<u>Shiner, swallowtail</u>	Notropis procne	
010069		<u>Shiner, white</u>	Luxilus albeolus	
010058		<u>Stoneroller, central</u>	Campostoma anomalum	
010108		<u>Sucker, northern hog</u>	Hypentelium nigricans	

010105		<u>Sucker, white</u>	Catostomus commersoni	
010178		<u>Sunfish, bluespotted</u>	Enneacanthus gloriosus	
010181		<u>Sunfish, green</u>	Lepomis cyanellus	
010180		<u>Sunfish, redbreast</u>	Lepomis auritus	
010185		<u>Sunfish, redear</u>	Lepomis microlophus	
010216		<u>Walleye</u>	Stizostedion vitreum vitreum	
010177		<u>Warmouth</u>	Lepomis gulosus	
020001		<u>Amphiuma, two-toed</u>	Amphiuma means	
020004		<u>Bullfrog, American</u>	Lithobates catesbeianus	
020003		<u>Frog, Brimley's chorus</u>	Pseudacris brimleyi	
020015		<u>Frog, coastal plain cricket</u>	Acris gryllus gryllus	
020012		<u>Frog, eastern cricket</u>	Acris crepitans crepitans	Yes
020008		<u>Frog, northern green</u>	Lithobates clamitans melanota	
020013		<u>Frog, pickerel</u>	Lithobates palustris	
020016		<u>Frog, southern leopard</u>	Lithobates sphenoccephalus utricularius	
020018		<u>Frog, upland chorus</u>	Pseudacris feriarum feriarum	
020065		<u>Newt, red-spotted</u>	Notophthalmus viridescens viridescens	Yes
020071		<u>Peeper, northern spring</u>	Pseudacris crucifer crucifer	
020084		<u>Salamander, Atlantic Coast Slimy</u>	Plethodon chlorobryonis	
020029		<u>Salamander, four-toed</u>	Hemidactylium scutatum	Yes
020035		<u>Salamander, marbled</u>	Ambystoma opacum	
020038		<u>Salamander, northern dusky</u>	Desmognathus fuscus	
020070		<u>Salamander, northern red</u>	Pseudotriton ruber ruber	
020048		<u>Salamander, southern dusky</u>	Desmognathus auriculatus	
020050		<u>Salamander, southern two-lined</u>	Eurycea cirrigera	
020049		<u>Salamander, spotted</u>	Ambystoma maculatum	Yes
020051		<u>Salamander, three-lined</u>	Eurycea guttolineata	Yes
020080		<u>Salamander, white-spotted slimy</u>	Plethodon cylindraceus	
020059		<u>Toad, eastern American</u>	Anaxyrus americanus americanus	
020060		<u>Toad, eastern narrow-mouthed</u>	Gastrophryne carolinensis	
020062		<u>Toad, Fowler's</u>	Anaxyrus fowleri	
020064		<u>Toad, southern</u>	Anaxyrus terrestris	
020006		<u>Treefrog, Cope's gray</u>	Hyla chrysoscelis	
020007		<u>Treefrog, gray</u>	Hyla versicolor	
020014		<u>Treefrog, pine woods</u>	Hyla femoralis	
020017		<u>Treefrog, squirrel</u>	Hyla squirella	
030041		<u>Brownsnake, northern</u>	Storeria dekayi dekayi	
030059		<u>Cooter, eastern river</u>	Pseudemys concinna concinna	

030057		<u>Cooter, northern red-bellied</u>	<i>Pseudemys rubriventris</i>	
030016		<u>Copperhead, northern</u>	<i>Agkistrodon contortrix mokasen</i>	
030022		<u>Cornsnake, red</u>	<i>Pantherophis guttatus</i>	
030049		<u>Earthsnake, eastern smooth</u>	<i>Virginia valeriae valeriae</i>	
030047		<u>Earthsnake, rough</u>	<i>Virginia striatula</i>	
030044		<u>Gartersnake, eastern</u>	<i>Thamnophis sirtalis sirtalis</i>	
030038		<u>Greensnake, northern rough</u>	<i>Opheodrys aestivus aestivus</i>	
030026		<u>Kingsnake, eastern</u>	<i>Lampropeltis getula getula</i>	Yes
030027		<u>Kingsnake, mole</u>	<i>Lampropeltis calligaster rhombomaculata</i>	
030002		<u>Lizard, eastern fence</u>	<i>Sceloporus undulatus</i>	
030029		<u>Milksnake, eastern</u>	<i>Lampropeltis triangulum triangulum</i>	
030018		<u>Racer, northern black</u>	<i>Coluber constrictor constrictor</i>	
030008		<u>Racerunner, eastern six-lined</u>	<i>Aspidoscelis sexlineata sexlineata</i>	
030023		<u>Ratsnake, eastern</u>	<i>Pantherophis alleghaniensis</i>	Yes
030006		<u>Skink, broad-headed</u>	<i>Plestiodon laticeps</i>	
030004		<u>Skink, common five-lined</u>	<i>Plestiodon fasciatus</i>	
030007		<u>Skink, little brown</u>	<i>Scincella lateralis</i>	
030005		<u>Skink, southeastern five-lined</u>	<i>Plestiodon inexpectatus</i>	
030042		<u>Snake, northern red-bellied</u>	<i>Storeria occipitomaculata occipitomaculata</i>	
030020		<u>Snake, northern ring-necked</u>	<i>Diadophis punctatus edwardsii</i>	
030052		<u>Stinkpot</u>	<i>Sternotherus odoratus</i>	
030051		<u>Turtle, eastern mud</u>	<i>Kinosternon subrubrum subrubrum</i>	
030060		<u>Turtle, eastern painted</u>	<i>Chrysemys picta picta</i>	
030050		<u>Turtle, eastern snapping</u>	<i>Chelydra serpentina serpentina</i>	
030037		<u>Watersnake, brown</u>	<i>Nerodia taxispilota</i>	
030034		<u>Watersnake, northern</u>	<i>Nerodia sipedon sipedon</i>	
030019		<u>Wormsnake, eastern</u>	<i>Carphophis amoenus amoenus</i>	
040346		<u>Blackbird, red-winged</u>	<i>Agelaius phoeniceus</i>	Yes
040282		<u>Bluebird, eastern</u>	<i>Sialia sialis</i>	Yes
040068		<u>Bufflehead</u>	<i>Bucephala albeola</i>	
040361		<u>Bunting, indigo</u>	<i>Passerina cyanea</i>	Yes
040401		<u>Bunting, snow</u>	<i>Plectrophenax nivalis nivalis</i>	
040357		<u>Cardinal, northern</u>	<i>Cardinalis cardinalis</i>	Yes
040258		<u>Chickadee, Carolina</u>	<i>Poecile carolinensis</i>	Yes
040113		<u>Coot, American</u>	<i>Fulica americana</i>	
040024		<u>Cormorant, double-crested</u>	<i>Phalacrocorax auritus</i>	
040353		<u>Cowbird, brown-headed</u>	<i>Molothrus ater</i>	Yes
040373		<u>Crossbill, white-winged</u>	<i>Loxia leucoptera</i>	

040255		<u>Crow, American</u>	Corvus brachyrhynchos	<u>Yes</u>
040256		<u>Crow, fish</u>	Corvus ossifragus	
040203		<u>Cuckoo, black-billed</u>	Coccyzus erythrophthalmus	
040198		<u>Dove, mourning</u>	Zenaida macroura carolinensis	<u>Yes</u>
040061		<u>Duck, wood</u>	Aix sponsa	<u>Yes</u>
040367		<u>Finch, house</u>	Carpodacus mexicanus	
040221		<u>Flicker, northern</u>	Colaptes auratus	<u>Yes</u>
040239		<u>Flycatcher, Acadian</u>	Empidonax virescens	<u>Yes</u>
040234		<u>Flycatcher, great crested</u>	Myiarchus crinitus	<u>Yes</u>
040284		<u>Gnatcatcher, blue-gray</u>	Polioptila caerulea	<u>Yes</u>
040371		<u>Goldfinch, American</u>	Carduelis tristis	<u>Yes</u>
040045		<u>Goose, Canada</u>	Branta canadensis	<u>Yes</u>
040352		<u>Grackle, common</u>	Quiscalus quiscula	<u>Yes</u>
040008		<u>Grebe, pied-billed</u>	Podilymbus podiceps	
040360		<u>Grosbeak, blue</u>	Guiraca caerulea caerulea	<u>Yes</u>
040365		<u>Grosbeak, evening</u>	Coccothraustes vespertinus	
040167		<u>Gull, herring</u>	Larus argentatus	
040173		<u>Gull, laughing</u>	Larus atricilla	
040170		<u>Gull, ring-billed</u>	Larus delawarensis	
040089		<u>Hawk, broad-winged</u>	Buteo platypterus	
040086		<u>Hawk, Cooper's</u>	Accipiter cooperii	<u>Yes</u>
040088		<u>Hawk, red-shouldered</u>	Buteo lineatus lineatus	<u>Yes</u>
040087		<u>Hawk, red-tailed</u>	Buteo jamaicensis	<u>Yes</u>
040090		<u>Hawk, rough-legged</u>	Buteo lagopus johannis	
040085		<u>Hawk, sharp-shinned</u>	Accipiter striatus velox	
040027		<u>Heron, great blue</u>	Ardea herodias herodias	<u>Yes</u>
040218		<u>Hummingbird, ruby-throated</u>	Archilochus colubris	<u>Yes</u>
040252		<u>Jay, blue</u>	Cyanocitta cristata	<u>Yes</u>
040387		<u>Junco, dark-eyed</u>	Junco hyemalis	
040098		<u>Kestrel, American</u>	Falco sparverius sparverius	
040119		<u>Killdeer</u>	Charadrius vociferus	<u>Yes</u>
040220		<u>Kingfisher, belted</u>	Ceryle alcyon	
040286		<u>Kinglet, ruby-crowned</u>	Regulus calendula	
040245		<u>Lark, horned</u>	Eremophila alpestris	
040051		<u>Mallard</u>	Anas platyrhynchos	<u>Yes</u>
040251		<u>Martin, purple</u>	Progne subis	<u>Yes</u>
040271		<u>Mockingbird, northern</u>	Mimus polyglottos	
040216		<u>Nighthawk, common</u>	Chordeiles minor	
040261		<u>Nuthatch, white-breasted</u>	Sitta carolinensis	
040348		<u>Oriole, Baltimore</u>	Icterus galbula	

040347		<u>Oriole, orchard</u>	Icterus spurius	
040095		<u>Osprey</u>	Pandion haliaetus carolinensis	
040209		<u>Owl, barred</u>	Strix varia	
040206		<u>Owl, great horned</u>	Bubo virginianus	Yes
040211		<u>Owl, short-eared</u>	Asio flammeus	
040101		<u>Pheasant, ring-necked</u>	Phasianus colchicus	
040236		<u>Phoebe, eastern</u>	Sayornis phoebe	Yes
040197		<u>Pigeon, rock</u>	Columba livia	
040287		<u>Pipit, American</u>	Anthus rubescens	
040341		<u>Redstart, American</u>	Setophaga ruticilla	
040275		<u>Robin, American</u>	Turdus migratorius	Yes
040149		<u>Sandpiper, least</u>	Calidris minutilla	
040132		<u>Sandpiper, solitary</u>	Tringa solitaria	
040134		<u>Sandpiper, spotted</u>	Actitis macularia	
040066		<u>Scaup, lesser</u>	Aythya affinis	
040205		<u>Screech-owl, eastern</u>	Megascops asio	Yes
040370		<u>Siskin, pine</u>	Carduelis pinus	
040141		<u>Snipe, common</u>	Gallinago gallinago	
040108		<u>Sora</u>	Porzana carolina	
040389		<u>Sparrow, chipping</u>	Spizella passerina	Yes
040395		<u>Sparrow, fox</u>	Passerella iliaca	
040342		<u>Sparrow, house</u>	Passer domesticus	Yes
040377		<u>Sparrow, savannah</u>	Passerculus sandwichensis	
040398		<u>Sparrow, song</u>	Melospiza melodia	Yes
040397		<u>Sparrow, swamp</u>	Melospiza georgiana	
040383		<u>Sparrow, vesper</u>	Poocetes gramineus	
040393		<u>Sparrow, white-crowned</u>	Zonotrichia leucophrys	
040394		<u>Sparrow, white-throated</u>	Zonotrichia albicollis	
040294		<u>Starling, European</u>	Sturnus vulgaris	Yes
040249		<u>Swallow, barn</u>	Hirundo rustica	Yes
040246		<u>Swallow, tree</u>	Tachycineta bicolor	
040356		<u>Tanager, summer</u>	Piranga rubra	Yes
040056		<u>Teal, green-winged</u>	Anas crecca carolinensis	
040260		<u>Titmouse, tufted</u>	Baeolophus bicolor	Yes
040102		<u>Turkey, wild</u>	Meleagris gallopavo silvestris	Yes
040299		<u>Vireo, red-eyed</u>	Vireo olivaceus	Yes
040301		<u>Vireo, warbling</u>	Vireo gilvus gilvus	
040295		<u>Vireo, white-eyed</u>	Vireo griseus	Yes
040081		<u>Vulture, black</u>	Coragyps atratus	Yes

040080		<u>Vulture, turkey</u>	Cathartes aura	Yes
040316		<u>Warbler, black-throated blue</u>	Dendroica caerulescens	
040325		<u>Warbler, blackpoll</u>	Dendroica striata	
040323		<u>Warbler, chestnut-sided</u>	Dendroica pensylvanica	
040338		<u>Warbler, hooded</u>	Wilsonia citrina	Yes
040311		<u>Warbler, Nashville</u>	Vermivora ruficapilla	
040329		<u>Warbler, palm</u>	Dendroica palmarum	
040326		<u>Warbler, pine</u>	Dendroica pinus	Yes
040317		<u>Warbler, yellow-rumped</u>	Dendroica coronata cornata	
040322		<u>Warbler, yellow-throated</u>	Dendroica dominica	
040331		<u>Waterthrush, northern</u>	Seiurus noveboracensis	
040290		<u>Waxwing, cedar</u>	Bombycilla cedrorum	
040227		<u>Woodpecker, downy</u>	Picoides pubescens medianus	Yes
040226		<u>Woodpecker, hairy</u>	Picoides villosus	Yes
040222		<u>Woodpecker, pileated</u>	Dryocopus pileatus	
040223		<u>Woodpecker, red-bellied</u>	Melanerpes carolinus	Yes
040224		<u>Woodpecker, red-headed</u>	Melanerpes erythrocephalus	Yes
040268		<u>Wren, Carolina</u>	Thryothorus ludovicianus	Yes
040265		<u>Wren, house</u>	Troglodytes aedon	
040336		<u>Yellowthroat, common</u>	Geothlypis trichas	Yes
050028		<u>Bat, big brown</u>	Eptesicus fuscus fuscus	
050029		<u>Bat, eastern red</u>	Lasiurus borealis borealis	
050033		<u>Bat, evening</u>	Nycticeius humeralis humeralis	
050030		<u>Bat, hoary</u>	Lasiurus cinereus cinereus	
050020		<u>Bat, little brown</u>	Myotis lucifugus lucifugus	
050025		<u>Bat, silver-haired</u>	Lasionycteris noctivagans	
050037		<u>Bear, black</u>	Ursus americanus americanus	
050069		<u>Beaver, American</u>	Castor canadensis	
050116		<u>Beaver, Carolina</u>	Castor canadensis carolinensis	
050051		<u>Bobcat</u>	Lynx rufus rufus	
050055		<u>Chipmunk, Fisher's eastern</u>	Tamias striatus fisheri	
050103		<u>Cottontail, eastern</u>	Sylvilagus floridanus mallurus	
050125		<u>Coyote</u>	Canis latrans	
050108		<u>Deer, white-tailed</u>	Odocoileus virginianus	
050050		<u>Fox, common gray</u>	Urocyon cinereoargenteus cinereoargenteus	
050049		<u>Fox, red</u>	Vulpes vulpes fulva	
050042		<u>Mink, common</u>	Mustela vison mink	
050017		<u>Mole, eastern</u>	Scalopus aquaticus aquaticus	
050074		<u>Mouse, common white-footed</u>	Peromyscus leucopus leucopus	

050071		<u>Mouse, eastern harvest</u>	Reithrodontomys humulis virginianus	
050098		<u>Mouse, house</u>	Mus musculus musculus	
050076		<u>Mouse, Lewis' golden</u>	Ochrotomys nuttalli nuttalli	
050099		<u>Mouse, meadow jumping</u>	Zapus hudsonius americanus	
050093		<u>Muskrat, large-toothed</u>	Ondatra zibethicus macrodon	
050022		<u>Myotis, northern</u>	Myotis septentrionalis septentrionalis	
050001		<u>Opossum, Virginia</u>	Didelphis virginiana virginiana	
050027		<u>Pipistrelle, eastern</u>	Pipistrellus subflavus subflavus	
050038		<u>Raccoon</u>	Procyon lotor lotor	
050094		<u>Rat, black</u>	Rattus rattus rattus	
050079		<u>Rat, hispid cotton</u>	Sigmodon hispidus virginianus	
050078		<u>Rat, marsh rice</u>	Oryzomys palustris palustris	
050095		<u>Rat, Norway</u>	Rattus norvegicus norvegicus	
050015		<u>Shrew, least</u>	Cryptotis parva parva	
050010		<u>Shrew, pygmy</u>	Sorex hoyi winnemana	
050007		<u>Shrew, southeastern</u>	Sorex longirostris longirostris	
050011		<u>Shrew, southern short-tailed</u>	Blarina carolinensis carolinensis	
050047		<u>Skunk, striped</u>	Mephitis mephitis nigra	
050048		<u>Skunk, striped</u>	Mephitis mephitis mephitis	
050057		<u>Squirrel, eastern gray</u>	Sciurus carolinensis carolinensis	
050065		<u>Squirrel, southern flying</u>	Glaucomys volans volans	
050059		<u>Squirrel, talkative red</u>	Tamiasciurus hudsonicus loquax	
050090		<u>Vole, common pine</u>	Microtus pinetorum pinetorum	
050082		<u>Vole, meadow</u>	Microtus pennsylvanicus pennsylvanicus	
050041		<u>Weasel, long-tailed</u>	Mustela frenata noveboracensis	
050054		<u>Woodchuck</u>	Marmota monax monax	
060223		<u>Elliptio complex</u>	Elliptio sp.	Yes
060224		<u>lanceolate Elliptio</u>	Elliptio sp.	Yes
060025		<u>Mussel, eastern elliptio</u>	Elliptio complanata	Yes
060142		<u>Mussel, pondhorn</u>	Unio merus tetralasmus	
060061		<u>Snail, Piedmont elimia</u>	Elimia virginica	Yes
070099		<u>Crayfish</u>	Fallicambarus uhleri	
070130		<u>CRAYFISH</u>	Orconectes c. f. spinosus	
070102		<u>Crayfish, Appalachian brook</u>	Cambarus bartonii bartonii	
070095		<u>Crayfish, devil</u>	Cambarus diogenes diogenes	
070093		<u>Crayfish, no common name</u>	Cambarus longulus	
070094		<u>Crayfish, no common name</u>	Cambarus acuminatus	
070098		<u>Crayfish, spiny cheek</u>	Orconectes limosus	
070120		<u>CRAYFISH, WHITE RIVER</u>	Procambarus acutus	

100043		<u>Armyworm</u>	<i>Pseudaletia unipuncta</i>
100041		<u>Borer, European corn</u>	<i>Ostrinia nubilatis</i>
100274		<u>Butterfly, Appalachian brown</u>	<i>Satyrodes appalachia</i>
100196		<u>Butterfly, Brazilian skipper</u>	<i>Calpodus ethlius</i>
100205		<u>Butterfly, cabbage white</u>	<i>Pieris rapae</i>
100278		<u>Butterfly, Carolina satyr</u>	<i>Hermeuptychia sosybius</i>
100277		<u>Butterfly, common wood-nymph</u>	<i>Cercyonis pegala</i>
100271		<u>Butterfly, creole pearly-eye</u>	<i>Enodia creola</i>
100228		<u>Butterfly, gray hairstreak</u>	<i>Strymon melinus</i>
100149		<u>Butterfly, Horace's duskywing</u>	<i>Erynnis horatius</i>
100279		<u>Butterfly, little wood-satyr</u>	<i>Megisto cymela</i>
100211		<u>Butterfly, orange sulphur</u>	<i>Colias eurytheme</i>
100203		<u>Butterfly, Palamedes swallowtail</u>	<i>Papilio palamedes</i>
100273		<u>Butterfly, southern pearly-eye</u>	<i>Enodia portlandia</i>
100158		<u>Butterfly, swarthy skipper</u>	<i>Nastra lherminier</i>
100169		<u>Butterfly, tawny-edged skipper</u>	<i>Polites themistocles</i>
100026		<u>Deerfly</u>	<i>Chrysops vittatus vittatus</i>
100042		<u>Earworm, corn</u>	<i>Heliathis zea</i>
100040		<u>Moth, codling</u>	<i>Cydia pomonella</i>
100047		<u>Moth, gypsy</u>	<i>Lymantria dispar</i>
110230		<u>Tick, American dog</u>	<i>Dermacentor variabilis</i>
110232		<u>Tick, brown dog</u>	<i>Rhipicephalus sanguineus</i>
110228		<u>Tick, lone star</u>	<i>Amblyomma americanum</i>
110231		<u>Tick, rabbit</u>	<i>Haemaphysalis leporispalustris</i>
110229		<u>Tick, winter</u>	<i>Dermacentor albipictus</i>

* FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; SC=State Candidate; CC=Collection Concern; SS=State Special Concern

** I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

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- Site tested using browsers Firefox 2.0, Firefox 3.0, IE 6, IE 7, and Opera 9.2 DEQSW3 I 215674 undefined
- W3C HTML [validation](#) <BASE href="http://vafwis.org/fwis/NewPages/">[VaFWIS report search.asp](#)

Collection Record 305113

36,58,50.9 -77,44,24.9
is the Search Point

☐ Display Item Location is not
in center at map center

Show Position Rings

☐ Yes ☐ No
1 mile and 1/4 mile at the Search
Point

Show Search Area

☐ Yes ☐ No
2 miles

Search Point is at
map center



Base Map Choices

Topography ☒

Map Overlay Choices

Current List: Search,
Observation

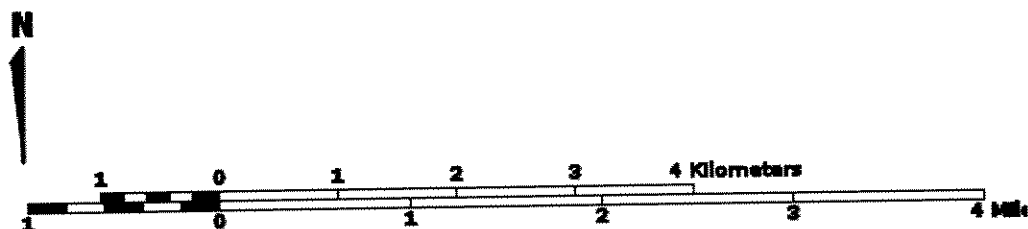
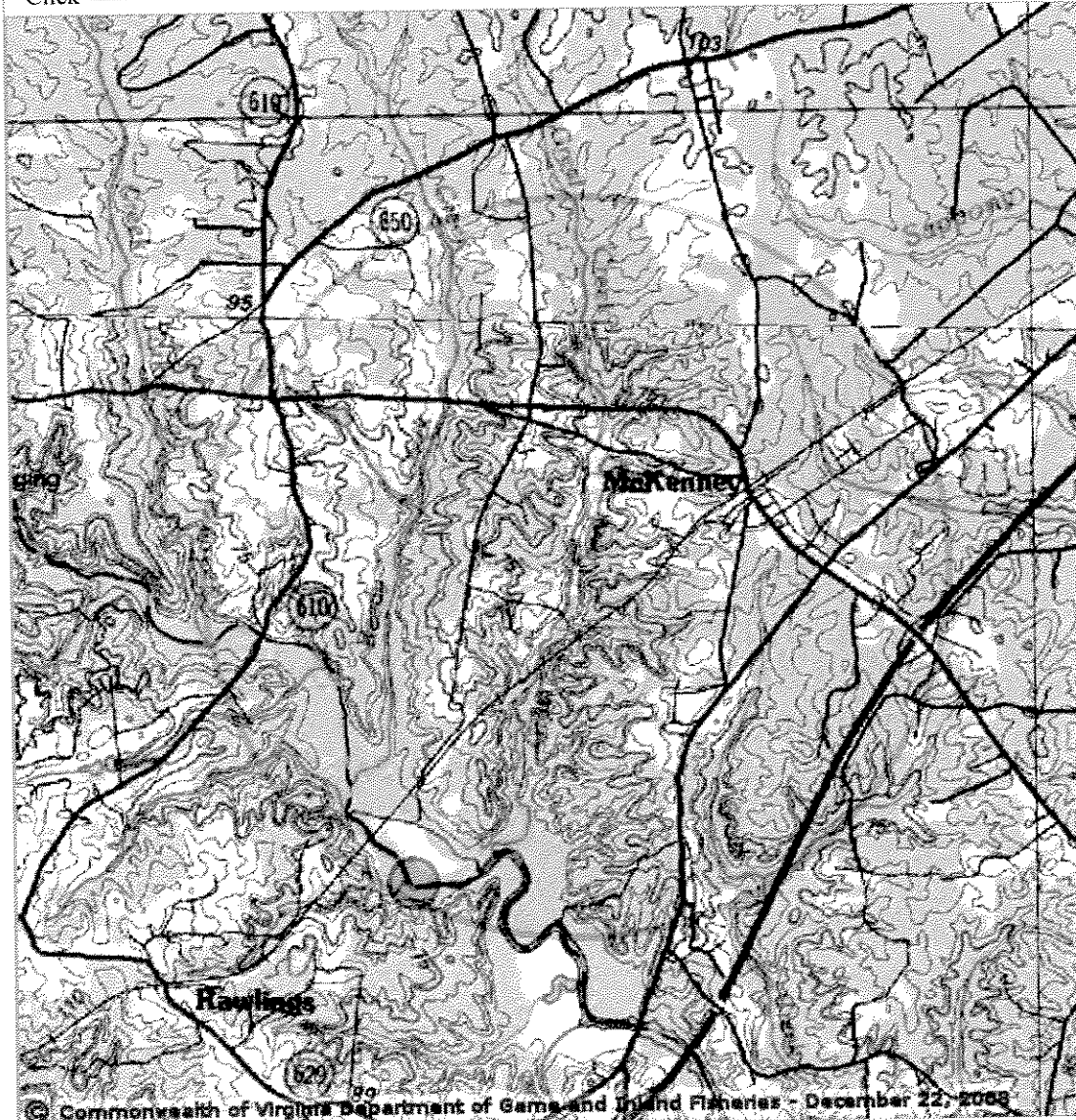
Map Overlay Legend

-  2 mile radius
Search Area
-  Data Collection Site

Virginia Fish and Wildlife Information Service



Map Click Map Scale Screen Size



Point of Search 36,58,50.9 -77,44,24.9

Map Location 36,58,50.9 -77,44,24.9

Select **Coordinate System:** ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 251306 and top 4101072. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

Black and white aerial photography acquired near 1990 and topographic maps are from the United States Department of the Interior, United States Geological Survey.

Shaded topographic maps are from TOPO! ©2006 National Geographic

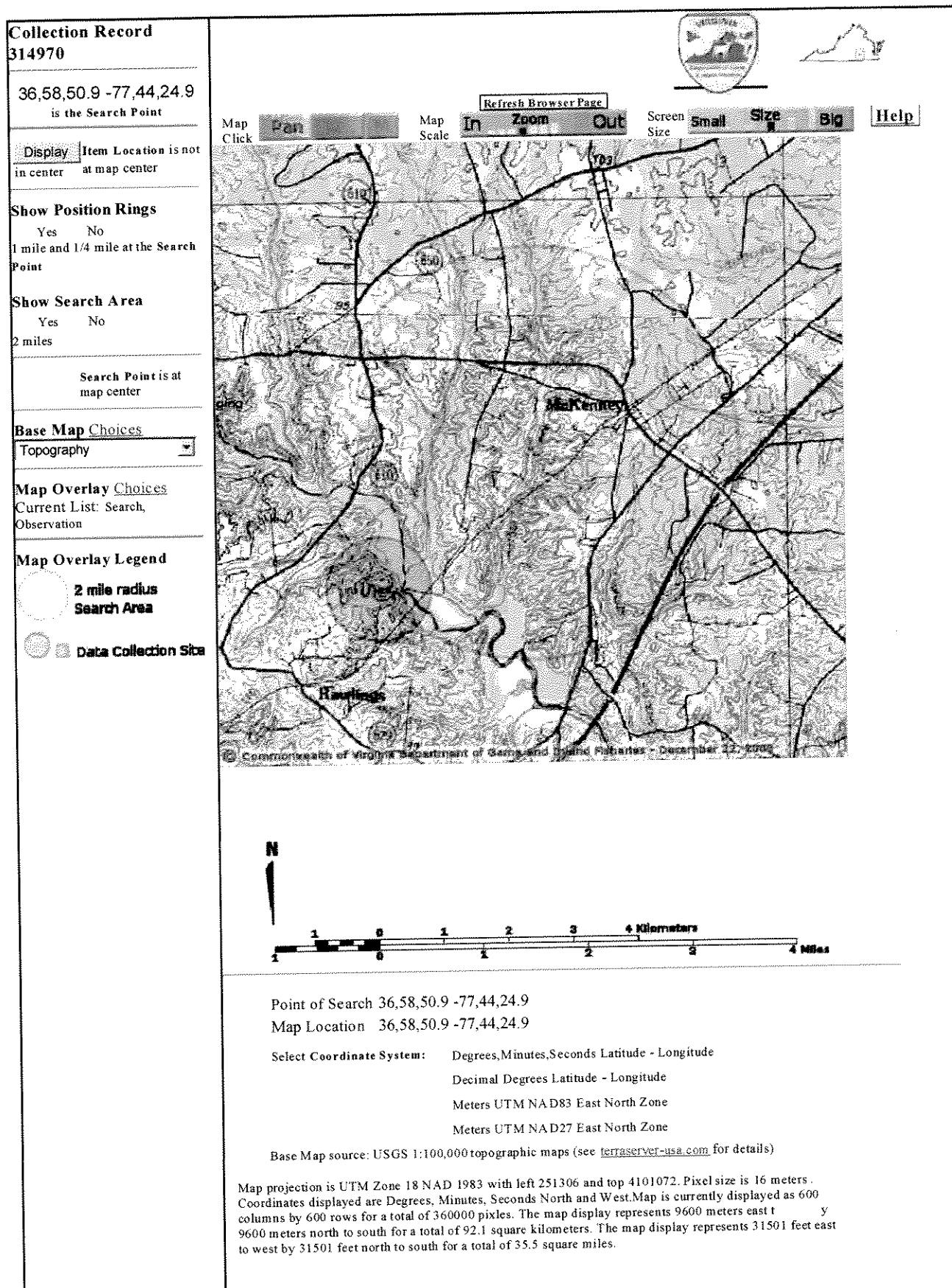
<http://www.nationalgeographic.com/topo>

Color aerial photography acquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network

All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries

map assembled 2008-12-22 08:53:39 (qa/qc May 21, 2008 10 49 - tn=215674.2 dist=32181)

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map assembled 2008-12-22 09:43:38 (qa/qc May 21, 2008 10:49 - tn=215681.2 dist=32181)

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VaFWIS Map

Collection Record
305113

36,58,50.9 -77,44,24.9
 is the Search Point

Item Location is at
 map center

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the Search
 Point

Show Search Area

☒ Yes ☐ No

2 miles

Display Search Point is not
 in center at map center



Base Map Choices

Topography ☒

Map Overlay Choices

Current List: Search,
 Observation

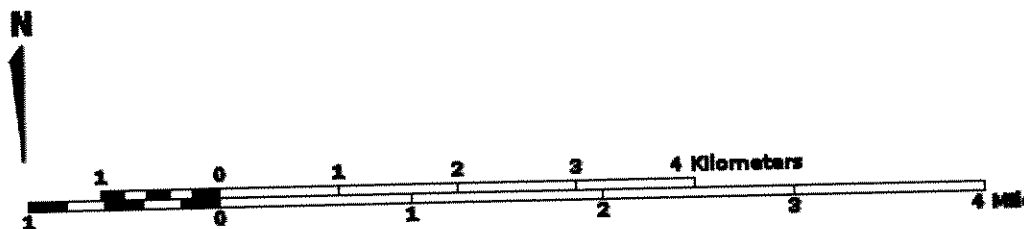
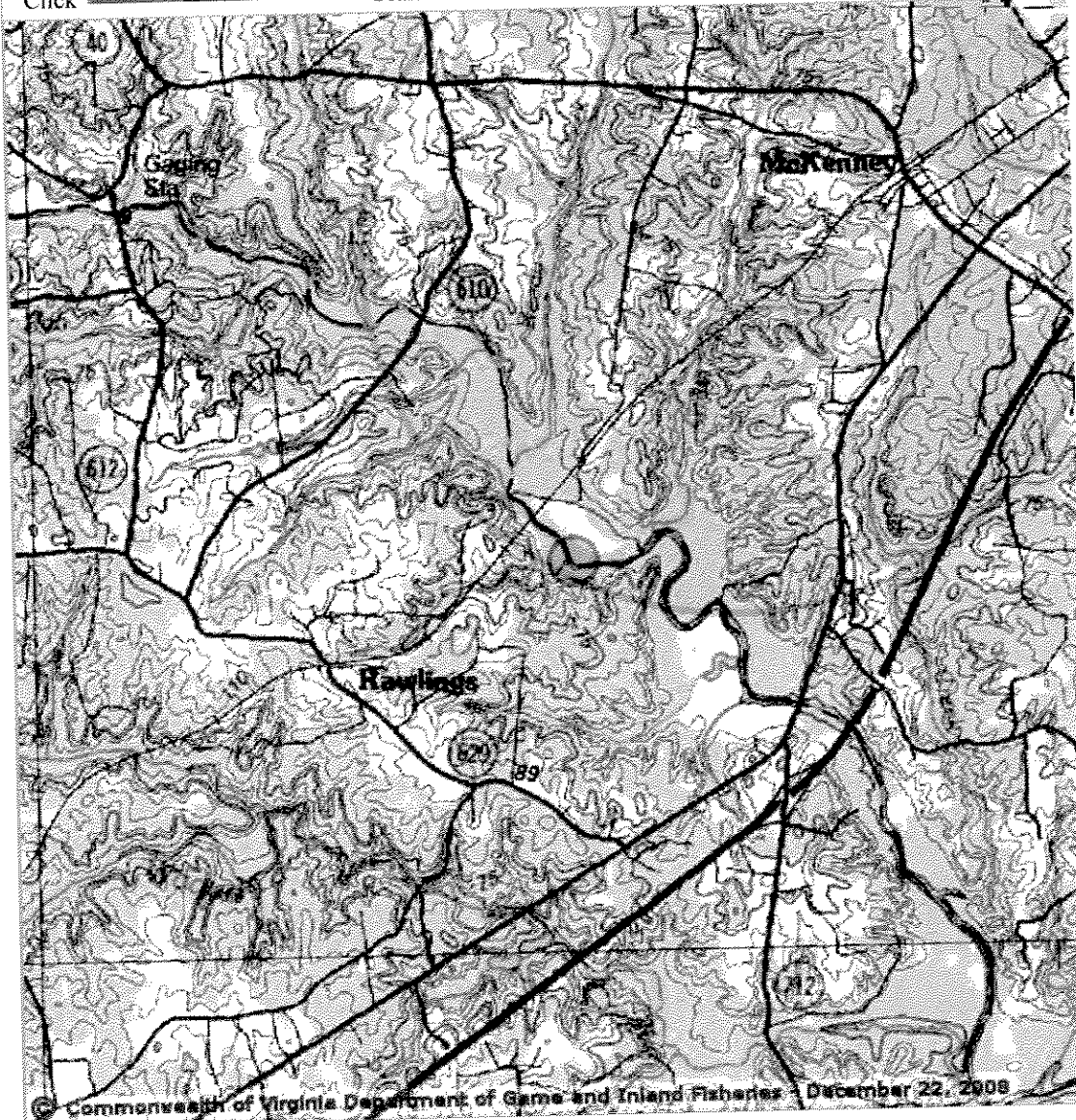
Map Overlay Legend

-  2 mile radius
 Search Area
-  Data Collection Site

Virginia Fish and Wildlife Information Service



back Map Click Refresh Browse Page In Zoom Out Screen Size Small Size



Point of Search 36,58,50.9 -77,44,24.9

Map Location 36,57,21.7 -77,45,19.0

Select **Coordinate System:** ☐ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 249890 and top 4098361. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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Taxonomy

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Taxonomy

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Taxonomy chapter for Shrike, migrant loggerhead (040292)

Taxonomy

Subphylum	Vertebrata
Class	Aves
Subclass	Neornithes
Species Order	Passeriformes
Species Suborder	N/A
Family	Laniidae
SubFamily	Laniinae
Genus	Lanius
Species	ludovicianus
Subspecies	migrans
Authority	Linnaeus, 1766
Taxonomy Comments	AKA butcher bird, migrant shrike. Called "migrant" because it migrates in winter to the southern half of its range or further south *404,439*. One of two subspecies resident in Virginia; the other is "ludovicianus". Both subspecies, as well as intermediate forms, may be found in the Ridge and Valley province of the state *9333*. The two subspecies can only be distinguished reliably morphometrically, so that field identification to subspecies is rarely reported. The major sources of data for shrike distribution in Virginia *9333, 9797* do not distinguish the two subspecies in their records.

References for Taxonomy

Ref.Id Citation

- 404 American Ornithologists' Union, 1957, Check-list of North American Birds, 691 pgs., American Ornithologists' Union, Baltimore, MD
- 439 Bent, A.C., 1965, Life histories of North American wagtails, shrikes, vireos, and their allies. Dover Publishing republication of the 1950 Smithsonian Bulletin 197, 411 pp. pgs., Dover Publishing, Inc., New York
- 575 Mayr, E., 1969, Principles of Systematic Zoology, 428 pgs., McGraw-Hill, New York, NY
- 691 Via, J.W., Linzey, D.W. (Ed.), 1979, Loggerhead shrike from the Proceedings of the Symposium on Endangered and Threatened Plants and Animals of Virginia, pg. 440-441, Extension Div, VA Tech, Blacksburg, VA
- 1599 Martin, A.C., Zim, H.S., Nelson, A.L., 1951, American wildlife and plants, 500 pgs., Dover Publications, Inc., New York
- 4275 American Ornithologists' Union, 1983, The A.O.U. Checklist of North American Birds, 877 pgs., American Ornithologists' Union
- 9286 Terwilliger, K.T., 1991, Virginia's endangered species: Proceedings of a symposium. Coordinated by the Virginia Dept. of Game and Inland Fisheries, Nongame and Endangered Species Program, 672 pp. pgs., McDonald and Woodward Publ. Comp., Blacksburg, VA
- 9333 Luukkonen, D. R., Fraser, J. D., 1987, Loggerhead shrike status and breeding ecology in Virginia, M.S. Thesis, 80 pgs., Virginia Tech
- 9797 Va. Society of Ornithology 1991, 1991, Atlas of Virginia breeding birds, Virginia

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- W3C HTML validation <BASE href="http://vafwis.org/fwis/NewPages/">VaFWIS_booklet_chapters.asp



Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

WebID: W633655474818906250

Client Project Number: VA0060402

PROJECT INFORMATION

TITLE: McKenney STP

DESCRIPTION: Municipal Wastewater Discharge - VPDES Permit Reissuance

EXISTING SITE CONDITIONS: Discharge to Great Creek

QUADRANGLES: MCKENNEY

COUNTIES: Dinwiddie

Latitude/Longitude (DMS): 365852/774425

Acreage:

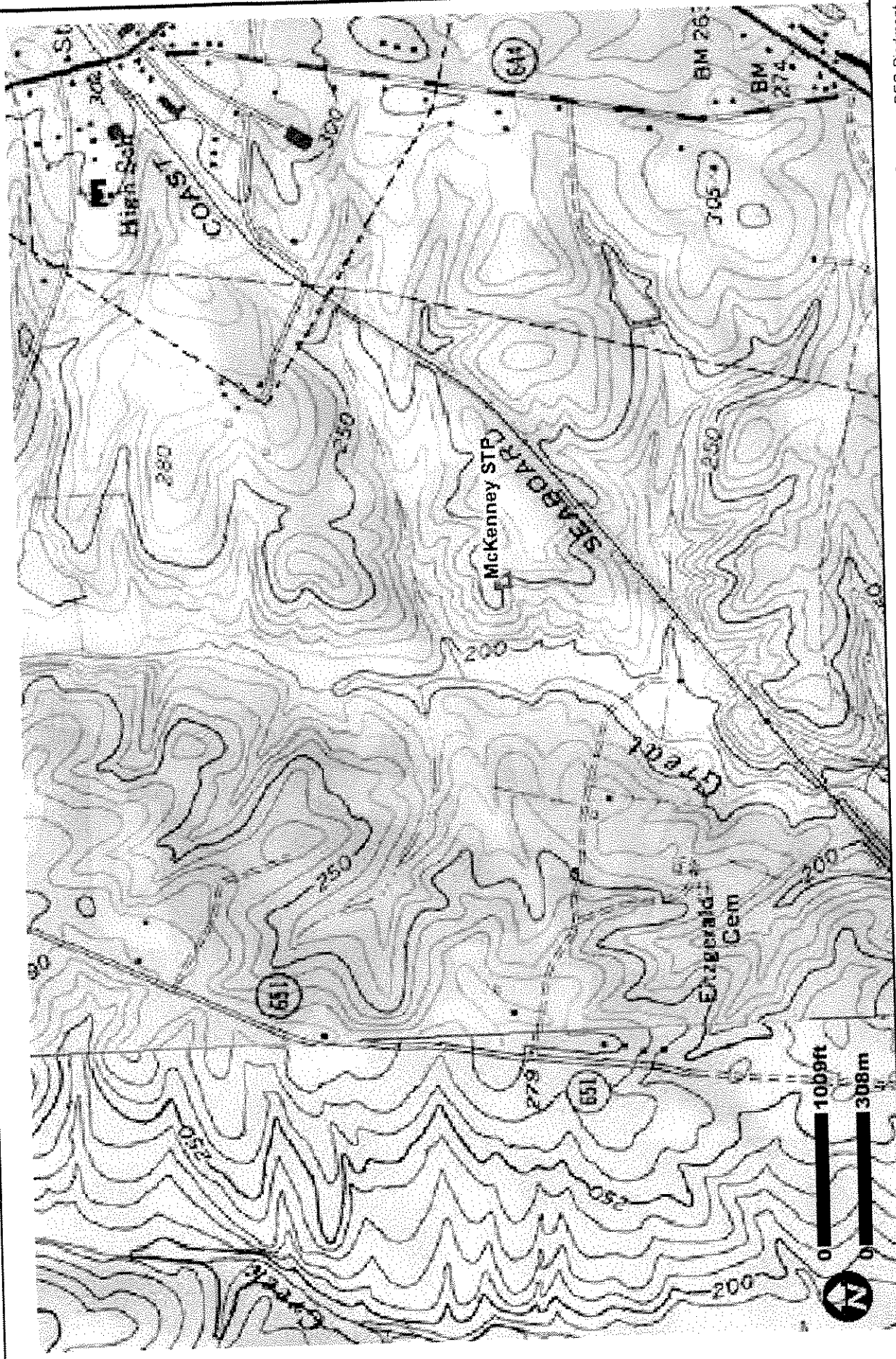
Comments: This search is part of a DGIF Coordination Request for the above noted permit reissuance.

REQUESTOR INFORMATION

Priority: No	Tier Level: 2	Tax ID:
Contact Name: Tamira Cohen		
Company Name: DEQ-Piedmont Regional Office		
Address: 4949-A Cox Road		
City: Glen Allen	State: VA	Zip: 23060
Phone: 804-527-5012	Fax: 804-5275106	Email: tcohen@deq.virginia.gov

Conservation Site Name	Site Type	Bank	Acreage	Listed Species Presence
GLNHR	GLNHR			NL
GLNHR	GLNHR			NL
GLNHR	GLNHR			NL
GLNHR	GLNHR			NL
NOTTOWAY RIVER - STURGEON CREEK SCU	SCU	B1	71	FL
Natural Heritage Conservation Sites within Search Radius				

Site-Name	Group-Name	common-name	scientific-name	GRANK	SRANK	Fed Status	st status	EO Rank	last obs date	precision
Vascular Plant	Blue Witch Grass	Dichanthelium caerulescens	G2G3	S1	SOC		H		1941-	
Vascular Plant	Bush's Muhly	Muhlenbergia bushii	G5	S1			H		1941-10	M
Vascular Plant	Rattlesnake- master	Eryngium yuccifolium var. yuccifolium	G5T5	S2			H		1974-07-26	G
Vascular Plant	Virginia Thistle	Cirsium virginianum	G3	S2			H		1968-09-29	M
Natural Heritage Resources within Search Radius										



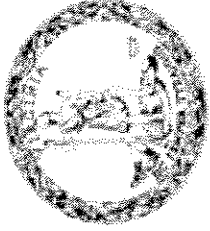
Company: DEQ-Piedmont
Regional Office
Lat/Long: 365852/77425

McKenney STP

Quads: MCKENNEY
Counties: Dinwiddie

L. Preston Bryant, Jr.
Secretary of Natural Resources

Joseph H. Maroon
Director



COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

The project mapped as part of this report has been searched against the Department of Conservation and Recreation's Biotics Data System for occurrences of natural heritage resources from the area indicated for this project. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in Biotics files, NATURAL HERITAGE RESOURCES HAVE BEEN DOCUMENTED within two miles of the indicated project boundaries.

You have submitted this project to DCR for a more detailed review for potential impacts to natural heritage resources. DCR will review the submitted project to identify the specific natural heritage resources in the vicinity of the proposed project. Using the expertise of our biologists, DCR will evaluate whether your specific project is likely to impact these resources, and if so how. DCR's response will indicate whether any negative impacts are likely and, if so, make recommendations to avoid, minimize and/or mitigate these impacts. If the potential negative impacts are to species that are state- or federally-listed as threatened or endangered, DCR will also recommend coordination with the appropriate regulatory agencies: the Virginia Department of Game and Inland Fisheries for state-listed animals, the Virginia Department of Agriculture and Consumer Services for state-listed plants and insects, and the United States Fish and Wildlife Service for federally listed plants and animals. If your project is expected to have positive impacts we will report those to you with recommendations for enhancing these benefits.

Please allow up to 30 days for a response.

We will review the project based on the information you included in the Project Info submittal form, which is included in the report that follows. Often additional information can help us make a more accurate and detailed assessment of a project's potential impacts to natural heritage resources. If you have additional information that you believe will help us better assess your project's potential impacts, you may send that information to us. Please refer to the project Title (from the first page of this report) and include this pdf file with any additional information you send us.

Thank you for submitting your project for review to the Virginia Natural Heritage Program through the NH Data Explorer. Should you have any questions or concerns about DCR, the Data Explorer, or this report, please contact the Natural Heritage Project Review Unit at 804-371-2708.